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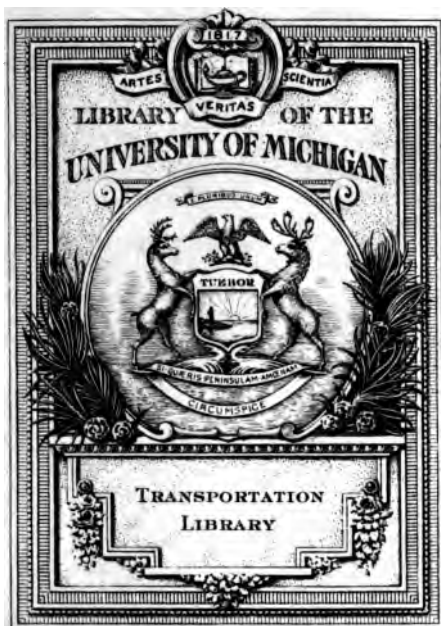
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RAILWAY

AND

COMMERCIAL INFORMATION.

BY SAMUEL SALT,

FELLOW OF THE STATISTICAL SOCIETY OF LONDON,
ORDINARY MEMBER OF THE LITERARY AND PHILOSOPHICAL SOCIETY OF MANCHESTER,
AND HONORARY MEMBER OF THE INSTITUTION OF MECHANICAL ENGINEERS.

I do not recommend any particular nostrum, but simply record Facts.
Give me the Facts, without the long and tedious details, which only tend to puzzle
and perplex the head.

LONDON:
PUBLISHED BY W. H. SMITH AND SON, 136, STRAND;
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1850.



MANCHESTER:
PRINTED BY BRADSHAW AND BLACKLOCK, 47, BROWN STREET.

Transferred.

TO JOSHUA PROCTER WESTHEAD, Esq., M.P.

DEAR SIR,

THE readiness with which you have at all times afforded your advice and assistance to many persons in connexion with the Railway of which you have long discharged the onerous duties of a Director, very much enhances the honour you have conferred in permitting me to dedicate the following pages to you. Allow me to express the hope that some of the facts contained therein may aid in raising Railway property from its present prostrated condition to its legitimate place amongst commercial investments. Such a consummation would, I feel assured, be hailed by no one with more satisfaction than by yourself, for it would restore joy to the hearts and homes of thousands, amongst whom many widows and orphans are perhaps the heaviest, because the most helpless, sufferers. The depreciation of Railway property has been as blighting in its effects as the baneful odour shed by the Upas tree; unlike it, however, its pestiferous influence has not been confined to the desert, but has brought misery to families in all ranks and classes of society.

I have the honour to be,

DEAR SIR,

Your most obedient Servant,

SAMUEL SALT.

MANOR HOUSE, ARDWICK, MANCHESTER,
January, 1850.

PREFACE.

THE flattering reception given to my "Statistics and Calculations," and also to my "Facts and Figures," has encouraged me to hope that the present book may prove useful and interesting to the Railway public.

The information it contains is somewhat similar in character to that given in my previous volumes; but, being brought down to the present time, it will, I trust, be found to possess a peculiar interest, from its embracing a most eventful period in Railway history,—a period during which property to an amazing extent has become so fearfully depreciated that thousands, who, a very few years ago, might have considered themselves in a position of independence, have now the mortification to see that, whilst the public are reaping largely the fruits of their hardly-earned accumulations, they are not only deprived of any pecuniary benefit in return, but, in many cases, even by those who are daily enjoying the benefits of their industry and enterprise, they are denied the sympathy which is generally excited by misfortune.

That the cause of all this is inherent in Railways themselves, as the great channels of intercourse and traffic, has never been asserted, perhaps, because *the fact is so obvious*, that Railways have effected vastly more than even the most sanguine of their projectors anticipated; would that we could pass so high an eulogium on the *management* of these great industrial undertakings; but here, unfortunately, *the fact is equally obvious*, that it is in this we must seek for much of the cause of their present disastrous condition—but I would willingly draw a veil over the past, and hope that the experience gained, may be big with promise for the future.

Let not the shareholders, however, congratulate themselves with the idea that, great as may be their pecuniary losses, they are exempt from blame in this respect—far from it; had it not have been for the unaccountable apathy which has characterised the great body of shareholders, directors would never have been appointed who were more remarkable for the absence than the possession of qualifications fitted for so onerous and responsible a position,—the partisanship or rival interests of a few would never have been suffered to involve the many in the expenditure of millions for the construction of branches remunerative only to the proprietor to whose works or property they extend, or duplicate lines, calculated only to be a source of vexation and annoyance to those by whose capital they have been constructed, and intended, in many cases, to compete with the property of the very persons who were making them.

Had these things not been permitted, had the counsels of a few men much in advance of their co-partners been listened to, and this wicked expenditure been nipped in the bud, the necessity would never have arisen for the creation of preference shares, and the various other ingenious expedients which have been resorted to, for the purpose of completing by such destructive means, that which was begun by deplorable folly. Nor could the legislature have reduced our fares and tolls below a remunerative level for the great trunk lines, for which acts had been obtained some few years ago, had not the opportunity been afforded, by our applications to Parliament for additional powers, to add these incubi to our otherwise profitable concerns, which powers, as every Railway director knows, could only be obtained by a reduction of fares and tolls being conceded over the whole undertaking.

Two instances may suffice to prove the foregoing assertions, viz., *that Railways have fully realised the expectations of their projectors*, and secondly, *that their present fearful depression is to be sought for in their puerile and improper management.*

It is true the cost of their construction has, in nearly every case, very much exceeded the original estimate; but it is equally true that the traffic has also been in excess of that anticipated, in a far greater ratio. Take one of the earliest Railways—the Liverpool and Manchester—as an example. For a comparison of the evidence given before Parliament on application being made for the Bill, with the actual results when the line was fairly in operation, see the following parallel passages:—

EVIDENCE IN 1825-6.

The Capital of the Company is £510,000
 with power to borrow 127,500
TOTAL £637,500

The communication between the two great cities at the termini of the line was proved to be quite insufficient for the traffic, and the prices charged were—

MERCHANDISE.

By existing conveyances,	The Railway engaged to carry at
Cotton, 15s. per ton.	11s. per ton.
Corn, 10s. „	9s. „
Sugar, 12s. „	9s. „

The tonnage rates to be reduced 5 per cent.; for every £1 per share the Company divided above 10 per cent.

PASSENGERS.

By existing conveyances,	The Railway engaged to carry at
Coaches, Inside 10s.	7s. 6d.
„ Outside .. 6s.	3s. 6d.

The number of passengers expected is 200 to 250 per diem.

INCOME.

The nett income expected is, for half year—

From Passengers	£10,000
„ Cattle	} 16,250
„ Goods	
„ Coals	5,000
TOTAL	£31,250

EXPENSES.

The expenses are expected to be 33 per cent.

DIVIDEND.

Satisfactory evidence produced that the receipts will pay the expenses and a fair remuneration.

RESULTS IN 1845, THE YEAR IN WHICH THE AMALGAMATION TOOK PLACE.

To Capital of Company, in Shares and Loans £1,711,005

The opening of the Railway caused an immense increase in the traffic, and the communication between the two great cities was found to be amply sufficient.

MERCHANDISE.

	The Railway has carried at
	s. d.
Cotton	9 0 per ton.
Corn	8 4 „
Sugar	9 0 „

PASSENGERS.

	The Railway has carried at
	s. d.
First class	5 6
Second class	4 0
Third class	2 7½

The number of Passengers was upwards of 1,500 per diem.

INCOME.

The nett income received is, for the half year—

From Passengers	£71,169 1 7
„ Cattle	} 57,603 2 5
„ Goods	
„ Coals	5,351 19 7
TOTAL	£134,124 3 7

EXPENSES.

The expenses for the half year were £65,610 9s. 1d., or nearly 49 per cent.

DIVIDEND.

The dividend declared was at the rate of 10 per centum per annum, leaving a surplus balance of £10,466.

Thus it appears, that whilst the capital has been increased *scarcely three-fold*, the expected traffic has been from *four to five times* the amount anticipated, although the rates and fares have been *considerably lower* than the Company had the Parliamentary Power to charge.

These statements need no comment to shew, that whilst the public has been largely benefited by greatly improved communication at immensely reduced rates, with all the collateral advantages following in their train—to the agriculturist, for the transport of his produce—to the merchant, for the exchange of his commodities, and to the travelling public for purposes both of business and pleasure—the most sanguine expectations of the projectors have at the same time been more than realised, in the soundness of judiciously-conceived Railway undertakings as remunerative speculations for the investment of capital to the enterprising.

Take the second instance, where, under wise and honest management, similar results might have been shewn, but which, unfortunately, is one of too large a class in which the interests of the many have been sacrificed to the cupidity and incapacity of the few :—

THE YORK, NEWCASTLE, AND BERWICK.

It will be known by most that this undertaking consists of the original Newcastle and Darlington, the Newcastle and South Shields, the Pontop and South Shields, the Durham Junction, the Durham and Sunderland, the Branling Junction, and the Newcastle and Berwick; all united by purchase, lease, or amalgamation, under the title of the "York, Newcastle and Berwick," by an Act which received the Royal assent July 9th, 1847.

From the very able Report lately issued by the Committee of Investigation, it appears that the aggregate amount of Capital in profitable operation is £5,351,908, to which add the real (not the estimated amount) of Share Capital of £1,430,922 for the Great North of England, for which an annual rent has been paid, and we have a total of Capital, in Shares and Loans, of £6,682,920.

The total amount of receipts for the half year ending June 30th, 1849, is £323,964, which, after allowing 45 per cent. for working expenses, and allowing 44 per cent. for that portion of Capital which was raised by Loan, would leave sufficient to pay a dividend of from 7 to 8 per cent. on the balance of the Share Capital. That nothing approaching this can be done, I am well aware; but it is not because the Railway was not capable of doing it, but from a variety of causes in its management and working, amongst which may be mentioned that of a large proportion of its Capital having cost £250 for every £100; and also that there will shortly be brought into operation a large amount of outlay, which, as it cannot yield a satisfactory return, ought never to have been engaged in.

With the causes, however, which have produced that fearful depression in Railway property, which the annals of the past

twelve months especially will have to record, I do not now profess to interfere, beyond the few remarks which this preface has afforded me the opportunity of making; the facts, however, which are contained in *the book* may assist many reflecting minds in forming their own conclusions, and I think that many of them exhibit a state of things so palpably fraught with ruin, that it may readily be seen, that whilst Railways are in themselves inherently good, their present disastrous condition is as easily traceable to past mismanagement or misconception of Railway interests, as the natural consequences of cause and effect are traceable to each other.

Notwithstanding all that has been done to destroy the worth of this vast property, I am happy to think it still possesses the elements of prosperity, which, under a judicious system of management, may yet be developed. By all conversant with the working of Railways, it will readily be confessed that this is not to be accomplished by the so-much-vaunted Government audit, *however desirable and necessary a good and efficient audit may be*. Beyond the acknowledged soundness of the principle, that Government interference with industrial undertakings is always prejudicial, unless the public good imperatively calls for it, we have surely had sufficient experience of the tender mercies of Parliament, in the perpetual burdens we have to sustain in providing interest for the money expended in obtaining our acts,—in the further sums expended in defending those acts when obtained from the rival lines to which so much encouragement has been given by the legislature,—and by having to submit to most uncalled-for reductions in our tolls and fares, when any pretence was afforded to the Government for their interference. If, after all this, the shareholders were to have their property further destroyed by an expensive commission having to be paid out of their receipts, and a swarm of officials continually upon their property to obstruct their business, my hopes of the future would partake very much of the sadness which a retrospect of the past produces.

I would suggest that sufficiently-paid and responsible auditors be selected by and from amongst the shareholders, who shall be entrusted with ample powers for their duties, and be altogether independent of the directors; and more than all, that they shall be persons having a sufficient interest in the property to make its permanent prosperity a matter of deep concern to them, and whose ability and experience for that kind of work shall be such as fit them for the office.

The auditors, however, can do comparatively little to restore Railway property to its just value; the main thing will be for both directors and shareholders to combine in promoting that cordial understanding amongst all Companies by which the present insane competition may be destroyed, and consequently the working expenses considerably reduced, and then it may be expected that the elements of prosperity which Railways possess may be so developed, that the shareholders may receive a satisfactory return for their investments, and Railways may again attain the proud position of being at once a boon to the public and a profit to their proprietary. When, by such an understanding as I have adverted to, the traffic of the country is being carried over the various lines at the full tolls allowed by Parliament, and at the vast reduction of working expenses which might thereby be effected, if the profits are not then found to be adequate to fair dividends, a case could be made out sufficiently strong to urge the Government to restore the fares and tolls to a remunerative amount, or in those cases in which they were originally fixed at too low a sum, to allow such an alteration as would meet the reasonable expectations of the proprietors.

Take one instance of the folly of Railway competition, drawn from our own county—I allude to Blackburn and Liverpool—the traffic between the two places is about 26,000 tons per annum, this, at the correct rate of 13s. 4d. per ton (a rate as easily obtainable as the present one, if the competing Companies were agreed), would amount to £17,333 6s. 8d. For this traffic there are three Railway Companies competing, and, for want of a cordial understanding, the amount is reduced to 5s. 10d. per ton, or £7,583 6s. 8d., being £9,750 per annum, positive loss. But the evil does not terminate here. In order to secure the traffic at this unremunerative rate, each Company is keeping up an establishment at the several competing termini of their lines much greater than would be required if the business had only to be done in the legitimate manner: thus, to use a common but very expressive and applicable phrase—“*burning the candle of the shareholders at both ends.*”

In writing thus, I would not be understood to cast reflections upon any body of men who have hitherto been connected with the legislative or executive conduct of Railways; for, however much the delinquencies of individuals may merit the most unqualified condemnation, my long connection with the most extensive, and, I

think, important Railway in the world, enables me to bear my testimony to the indefatigable energy and great personal sacrifices of time and comfort which have been called for and freely given, generally, by those who have been entrusted with the management of affairs.

But whilst some directors and managers have been exerting themselves to the utmost to accomplish what is wanting in these respects, the interests of one Railway have been so bound up in another that their most laudable efforts to promote a better system than that which has hitherto existed, have been almost, if not entirely, frustrated, by the unreasonable and foolish proceedings of others. The vicious system, however, of seeking an undue advantage at the expense of others, like all other proceedings which are not based upon the old maxim—

“Honesty is the best policy,”—

has been found the most destructive to its authors, and there is, consequently, reason to hope that the time is at hand when better counsels will bring about the much-to-be-desired results.

There appears one change in the opinions of some Directors which may conduce much to this end. They now acknowledge that dividends are not to be obtained by entrusting their affairs to Lawyers and Engineers, so much as from having active, industrious, intelligent, and practically-experienced managers, *who can feel that their own interests and those of the Railway they represent are identical*, and that it is principally by economy of management and development of traffic that dividends can be increased.

In proportion as the facts recorded in this volume lead Shareholders, Directors, and Managers to the conclusions at which I have hinted, my object in the labour I have incurred in looking up and down a thousand volumes, Parliamentary Blue Books and papers for the few stray facts, and issuing them from the press, will be accomplished.

SAMUEL SALT.

MANOR HOUSE, ARDWICK,
MANCHESTER, January, 1850.

ERRATUM.

At page 84, No. 117, the Exports in Coals are in error stated to be to the "*United Kingdom*," it should have been to "FOREIGN COUNTRIES AND THE BRITISH SETTLEMENTS ABROAD."

RAILWAY INFORMATION.

Railway Capital and Loans, 1844 to 1847.—No. 1.

Parliamentary Return, No. 71, dated 20th March, 1848, gives the following as the amount of Capital and Loans authorised by the various Railway Acts which have been passed since 1843, distinguishing the amounts sanctioned in each year.

	1844. Amount.			1845. Amount.			1846. Amount.			1847. Amount.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
By Shares	15,596,750	0	0	44,876,770	0	0	95,625,934	10	5	34,152,520	0	0
„ Loans	4,857,947	13	4	14,622,682	6	8	36,087,272	6	8	10,060,619	13	4
TOTAL	20,454,697	13	4	59,499,452	6	8	131,713,206	17	1	44,213,139	13	4

Railway Legislation from 1801 to 1848.—No. 2.

The following summary is extracted from Mr. Bigg's introduction to his Railway Acts of 1847, and other Parliamentary documents.

“The progress of Railway Legislation may be divided into four periods, viz., from 1801 to 1825, during which time the lines were intended almost exclusively for the conveyance of coals and minerals, and were proposed to be worked by animal power, which power alone was used until stationary and locomotive engines were introduced;—from 1826, when Passenger Railways were first sanctioned by Parliament, to the close of 1835;—from 1836, when standing orders were first framed to apply exclusively to Railways, to the close of 1843;—and from 1844, when the recent Railway movement commenced, to the present time.”

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"The Acts passed from 1801 to 1825 were fifty-five in number, and lines

authorised were principally for the purpose of facilitating the communication to and from certain canals and navigations. The amount of money expended, and the length of line constructed, cannot now be easily ascertained, nor is it of much importance, as of these Acts six only relate to lines which have been since used for the conveyance of passengers."

SUMMARY.

YEARS.	NUMBER OF ACTS PASSED				AMOUNT OF MONEY AUTHORISED TO BE RAISED.				LENGTH OF RAILWAY AUTHORISED TO BE CONSTRUCTED.			
	England & Wales	Scotland	Ireland.	TOTAL.	England and Wales.	Scotland.	Ireland.	TOTAL.	England & Wales	Scotland	Ireland.	TOTAL.
1801 to 1825	..	..	..	55	£	£	£	£	Miles	Mls	Mls	Mils
1826	6	4	1	11	920,600	167,053	600,000	1,687,653				
1827	3	3	..	6	126,600	125,008	....	251,608				
1828	8	..	..	8	424,000	....	....	424,000				
1829	7	2	..	9	769,250	134,875	....	904,125				
1830	5	3	..	8	867,500	66,150	....	933,650	815	76	36	927
1831	6	2	1	9	1,458,875	71,000	270,000	1,799,875				
1832	7	..	1	8	557,685	....	10,000	567,685				
1833	9	1	..	10	5,505,333	20,000	....	5,525,333				
1834	9	1	..	10	2,304,000	8,053	....	2,312,053				
1835	10	5	1	16	4,588,333	195,800	28,700	4,812,833				
1836	26	4	2	32	20,989,998	485,000	1,400,000	22,874,998	875	36	68	979
1837	20	4	3	27	10,654,166	1,435,633	1,464,000	13,553,799	338	84	104	526
1838	7	3	..	10	792,000	1,304,198	....	2,096,198	3	46	..	49
1839	12	4	..	16	6,181,896	273,901	....	6,455,797	50	..	..	50
1840	14	2	..	16	2,384,332	106,760	....	2,491,032	2	9	..	11
1841	12	3	..	15	3,024,353	386,333	....	3,410,686	5	9	..	14
1842	13	3	..	16	4,535,042	776,600	....	5,311,642	43	..	..	43
1843	16	4	1	21	3,410,284	430,666	20,400	3,861,350	41	4	..	45
1844	41	6	1	48	15,599,781	1,684,499	1,733,300	19,017,580	642	68	122	832
1845	92	15	13	120	42,493,112	8,564,929	10,299,332	61,357,373	1665	436	644	2745
1846	193	61	23	277	101,592,696	16,642,563	10,751,455	128,986,714	3348	851	710	4909
1847	141	39	16	196	27,540,783	8,429,768	2,036,692	38,007,233	969	253	129	1351
1848	56	21	6	83	....	....	....	18,000,000	..	..	..	330

Traffic on the Old Quay Canal, 1847.—No. 3.

The following is an account of Traffic on the Old Quay Canal, or Mersey and Irwell Navigation, between Runcorn and Manchester, for the year 1847 :—

From Manchester to Liverpool, on Tonnage.		From Manchester to Runcorn, by the Old Quay Company's own vessels.	
	Weight Tons.		Weight. Tons.
Coal	1,860	Sundries	400
Flags and Stones	2,660		
Grain	40	To Manchester from Runcorn, by the Old Quay Company's own vessels.	
Bale Goods, Cases, &c.	14,000	Clay	290
Sundries	260	Manganese	760
Total	18,820	Grain, Flour, &c.	3,100
		Iron	3,900
To Manchester from Liverpool, on Tonnage.		Lead	120
Clay	150	Slates	4,150
Cotton	38,600	Sundries	700
Flags and Stone	1,300	Total	12,920
Manganese	150		
Grain, Flour, &c.	27,000	Total to and from Runcorn, and from and to Runcorn and Man- chester	13,320
Groceries	23,000		
Iron	8,950		
Iron Ore	100		
Road Materials	13,000		
Salt	2,000		
Slates	9,020		
Timber	15,000		
Sundries	12,700		
Total	150,970		
Total from and to Liverpool, and to and from Liverpool and Man- chester, on tonnage	169,790		

Railway Contests.—No. 4.

Mr. Glyn thus expressed himself on the reckless fighting amongst Railways, at a meeting of the London and North-Western Railway, 18th February, 1848 :—

“ We do really hope that the time for Parliamentary contests between Companies is coming to an end. I wish I could say that they *were* ended ; but I do hope, from the course which matters are now taking, there is a probability—a strong probability—of our arriving at that point which we have all aimed at for some time past, when Railway Companies, instead of fighting for traffic from one district—instead of trying to ruin each other in a way which will soon tell upon the interests of their proprietaries, and consequently on those of the public—will unite together to endeavour, by a fair system of accommodation to the public, by doing their duty to themselves as well as to their customers, and by attention to their interests in Parliament, to put upon a safe basis the property in which you all, more or less, participate in different lines.”

Railway Officers in 1847 and 1848.—No. 5.

The following is a summary of persons employed on all Railways in England and Wales, Scotland and Ireland, on the 1st May, 1847, and 1st May, 1848, obtained from official documents:—

Railways Open for Traffic.			Railways in course of Construction.		
Description.	1847 No.	1848 No.	Description.	1847 No.	1848 No.
Secretaries		81	Secretaries	235	102
Managers		80	Managers	34	21
Treasurers	124	29	Treasurers	54	405
Engineers	96	95	Engineers	2,382	1897
Superintendents	399	343	Superintendents		243
Storekeepers	91	125	Storekeepers		145
Accountants	100	70	Accountants	264	88
Cashiers		48	Cashiers		306
Draughtsmen	100	108	Draughtsmen	1,437	887
Clerks	3,432	4,360	Clerks		29,087
Foremen	823	1,011	Artificers	240,301	147,325
Enginemen or Drivers		1,752	Labourers		153
Assistant Enginemen or	2,069	1,809	Inspectors		32
Firemen			Land Surveyors	6,741	6,250
Conductors or Guards ..	1,163	1,464	Miners or Quarrymen ..	1,087	685
Artificers	10,800	10,814	Foremen or Overseers ..		
Switchmen	1,041	1,058	Policemen, or Gate-		
Police-men		2,475	keepers	122	71
Porters	8,576	7,362	Porters, Servants, or		
Messengers		187	Watchmen	16	10
Platelayers	4,148	4,391	Platelayers	876	253
Labourers	12,493	14,297	Horse Drivers or Carters	1,793	45
Gatekeepers	407	401	Miscellaneous Employ-		
Waggoners	151	141	ment	487	116
Breaksmen	49	32			
Miscellaneous Employ-					
ment	256	197			
Total Number Employed	47,218	52,688	Total Number Employed	256,509	188,177
	Miles.	m. ch.		m. ch.	m. ch.
Length in Miles	3305½	4252 4¼	Length in Miles	6455 31	7387 72
Number of Stations	1,040	1321			

Gunpowder by Railway.—No. 6.

"In the course of a few months above 100 tons of gunpowder have been carried on the London and North Western to Liverpool, Manchester, Leeds, and other places. The waggons in which the gunpowder is conveyed are made expressly for the purpose. They are thus described in our contemporary, *Herapath's Journal*:— 'There are eight of these waggons, constructed in accordance with the patent of Mr. Henson. The body of the waggon is formed with sheet iron on the outside; the inside is lined with two-inch plank, between which and the iron outside a thickness of felt is carefully placed. These are screwed together from the outside, so that there is nothing but wood inside; except on the floor, which is covered with sheet lead. The door fits so close with a double rabbit that it is almost airtight, and it is therefore impossible for any fire to get to the powder inside the waggon. The axles are cased with wood. The comparative absence of the usual noise and vibration in the movement of these powder-waggons is very remarkable.'"—*Railway Chronicle*, 8th July, 1848.

Railway Passengers in 1848.—No. 7.

Return of the number of passengers conveyed on all the railways in the United Kingdom, during the year ending 30th June, 1848; showing the different classes, the receipts from each class, and from goods, &c.; also, the number miles of railway open on the 1st July, 1847, and on the 30th June, 1848, obtained from official documents:

	Number of Passengers.	Receipts.		
		£	s.	d.
First Class.....	7,190,779	1,792,533	3	8
Second Class.....	21,690,509½	2,352,152	11	5½
Third Class.....	15,241,529½	661,038	7	5½
Parliamentary Class.....	13,092,489	962,851	1	8½
Mixed Class.....	749,76½	11,807	4	10
Total.....	57,965,070½	5,720,382	9	1½
Receipts from Goods, Cattle, Carriages, Parcels, Mails, &c.....		4,213,169	14	5½
Total Receipts.....		9,933,552	3	7½
		M.	Ch.	
Length of Line open 1st July, 1847.....		3507	71½	
Do. do. 30th June, 1848.....		4357	64½	

Railway Capital and Loans—1844 to 1847.—No. 8.

Parliamentary Return, No. 731, dated 4th September, 1848, gives the following as the amount of capital and loans authorised under the several Acts of Incorporation in the years of 1844, 1845, 1846, and 1847:—

	1844	1845	1846	1847	Length of Line Opened on 31st March, 1848.	
	£	£	£	£	M.	Ch.
Capital.....	13,149,750	45,556,910	95,463,930	30,654,210		
Loans.....	4,720,611	15,268,178	36,632,294	9,543,165		
Total....	17,870,361	60,824,088	132,096,224	40,397,395	1761	39½
		M. Ch.	M. Ch.	M. Ch.		
Length of Line	821 71	2694 48	4593 1	1353 63½		

Cost of Working Railways.—No. 9.

The following Table is given in the report of the committee of inquiry appointed by the proprietors of the London, Brighton, and South Coast Railway, 14th February, 1848:—

Per-centage of Working Expenses on Traffic.

	1845.	1846.	1847.	Average.
South Western.....	34.49	39 11	42 75	38.74
Eastern Counties.....	38.88	34.98	36.26	36.70
Brighton.....	28.11	31.55	39.39	33.01
South Eastern.....	32.46	29.39	28.62	30.15

Railway Calls—1843 to 1848.—No. 10.

Parliamentary Return, No. 731, dated 4th September, 1848, gives the following summary of the amount received on calls; arrears due; sums borrowed, which remain owing; and the balance of capital uncalled for, &c. :—

	1843 And Previous.		1844		1845		1846		1847		1848	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Amount Received on Calls	41,310,049	8 5½	5,166,923	5 0	17,632,701	6 6	26,384,233	9 7	32,467,945	14 7	8,948,405	14 9
Amount Remaining Due on Calls	601,996	12 1	39,115	15 0	439,216	3 8	1,210,114	0 3	4,419,866	11 11	4,577,708	3 7
Sums borrowed, which remain owing	6,910,322	13 3	2,213,947	3 6	2,391,291	18 10	6,215,205	15 6	11,144,177	8 5	4,969,243	6 10
Balance of Capital uncalled for ..					£98,281,624		14s. 4d.					

These totals do not represent the amounts received by shares or Loans respectively on any particular day, as the returns made by the several companies apply to different dates, extending over a period of nearly four months.

Balance of Money which the Company retain power to borrow, £42,887,288 18s. 5d.

The First Railway Act.—No. 11.

Mr. Bigg says:—"The first Railway Act was passed in 1801, and authorised the Surrey Iron Railway Company to construct a railway from the river Thames, at Wandsworth, to Croydon; this Company applied to Parliament in 1846, representing 'that the traffic along the line has, ever since the completion thereof, been very small, and has of late years been gradually diminishing; and since the year 1825 no dividend whatever has been declared upon the shares in the undertaking,' and they obtained an Act, authorising the sale of their lands and the dissolution of the Company. It is a singular coincidence that the Session which witnessed the introduction of an unprecedented number of Bills, applying for parliamentary sanction to so many new lines, should be the same in which the Railway Company first incorporated pleaded the total failure of their undertaking as a ground for being allowed to wind up their affairs."

Speed and Gauge.—No. 12.

In a Report by Mr. R. Stephenson and Mr. Locke to the London and North-Western Company, in 1848, it is stated:—

"The limitation of Railway speed, then, is not to be found in the width of Gauge, but in other and different considerations, such as the strain to which it is prudent to submit materials the same on every Gauge,—the local features of the Railway (as its gradients, curves, &c.),—the comparative freedom or otherwise of the line from trains (such as Goods and Mineral trains) necessarily travelling at low speeds. Thus, on the London and South-Western, or Narrow Gauge Railway, the Express trains have, during the last twelve months, been travelling at a higher rate of speed (by $1\frac{1}{2}$ miles per hour) than those of the Great Western Railway, from London to Exeter, on the Broad Gauge."

Cost of Excavating and Contingencies.—No. 13.

In Mr. Stephenson's Report to the House of Commons, 1st May, 1848, on the cost of completing the works at Birkenhead, the following remarks are made:—

"I have found it unnecessary to deviate widely from the prices shown in those documents in any case, except that for the excavation of the great basin, where, although a contract has been entered into for the completion of the work at 1s. per yard, I am convinced that it will be so unremunerative that I doubt if the contract will be maintained to the completion of the work, and I have therefore charged the excavation at 1s. 3d. per yard. I have also added to the total cost 10 per cent. for superintendence and contingencies, which is the per-centage I am accustomed to apply to all my estimates."

Water for London and North Western Railway, at London.

No. 14.

The "Railway Chronicle" of 1st April, 1848, says:—

"Report says that the saving to be effected to the London and North Western in the present cost of water at the Camden Town Station, and the hotels at Euston Square, when the arrangements are completed for the supply from the well lately sunk at Camden Town, will be little short of £1,200 a year, while the total outlay for sinking the well, for engine, pumps, and main, to Euston Square, will not exceed £3,100."

Cost of Construction

I have carefully compiled, from official documents, the following many lines were afterwards amalgamated or leased by other Railways,

NAME OF RAILWAY.	Length of the Main Line.		Cost of Land, or sums paid for Land.			Engineering, or sums paid to the Engineers employed in the laying out and constructing of the Line.		
	m.	f.	£	s.	d.	£	s.	d.
Arbroath and Forfar Railway	15	2	17,387	0	0	2,505	5	4
Ballochney Railway	4	1	9,469	16	8	546	11	7
Birmingham and Gloucester Railway	53	0	180,656	7	8	47,559	4	3
Bodmin and Wadebridge Railway	12	0	1,664	4	9	1,825	6	2
Bolton and Leigh Railway .....	..	..	..	..	..	..	..	..
Bristol and Gloucester Railway	30	0	93,531	5	9	22,050	17	3
Chester and Birkenhead Railway	15	0	115,056	18	6	8,353	8	7
Dublin and Drogheda Railway	31	6	71,908	10	0	18,000	0	0
Dundee and Arbroath Railway	16	6	10,633	19	7	2,940	18	1
Dundee and Newtyle Railway	10	4	..	..	..	..	..	..
Durham and Sunderland Railway	15	0	..	..	..	..	..	..
Eastern Counties Railway	51	0	809,950	0	0	48,650	0	0
Edinburgh, Leith, and Granton Railway	5	6	81,606	0	0	7,354	0	0
Glasgow, Paisley, Kilmarnock, and Ayr	40	2	..	..	..	..	..	..
Grand Junction Railway	118	0	465,325	3	2	58,410	8	4
Gravesend and Rochester Railway	6	4	3,176	5	0	2,445	17	2
Great Western Railway	118	2	759,383	0	0	155,203	0	0
Hartlepool Docks and Railway	12	3	..	..	..	4,700	0	0
Hay Railway	12	0	8,643	10	5	3,777	0	2
Hull and Selby Railway	30	7	140,282	0	0	23,026	0	0
Leicester and Swannington Railway	16	2	17,164	17	4	3,285	5	10
Llanelli Railway and Dock	26	4	13,295	5	0	..	..	..
London and Birmingham Railway	112	2	866,780	0	0	96,678	0	0
London and Blackwall Railway	3	6	425,731	16	6	9,643	6	2
London and Brighton Railway	41	1	414,345	9	0	47,016	7	9
London and South-Western Railway	78	0	306,677	7	0	32,887	6	3
Manchester and Birmingham Railway	31	0	564,743	15	4	32,222	15	1
Manchester, Bolton and Bury Canal Navigation and Railway	10	0	70,666	4	5	16,190	13	7
Manchester and Leeds Railway	51	0	325,112	19	10	47,843	15	0
Maryport and Carlisle Railway	28	0	53,387	0	0	5,659	0	0
Monkland and Kirkintilloch Railway	10	0	19,430	6	3	1,614	6	6
Newcastle & Darlington Junction Railway	32	0	61,094	0	0	7,410	0	0
Newcastle-upon-Tyne & Carlisle Railway	64	6	165,940	10	4	24,495	18	2
Newcastle-upon-Tyne and North Shields	6	6	33,346	15	9	3,973	16	6
Newtyle and Coupar Angus Railway	5	2	750	0	0	865	0	0
North Union Railway	36	2	162,203	4	6	18,245	11	1
Pontypool and South Shields Railway	21	6	..	..	..	..	..	..
Preston and Wyre Railway and Harbour	20	0	38,656	18	11	10,178	19	4
St. Helens and Runcorn Gap Railway	8	0	24,379	8	2	1,950	0	0
Sheffield, Ashton-under-Lyne & Manchester	41	0	146,603	11	6	42,889	17	0
Slamannan Railway	12	4	13,130	6	8	1,808	2	6
South Eastern Railway	74	6	379,815	15	5	34,514	19	7
Stockton and Hartlepool Railway	8	1 1/2	6,069	0	6	3,400	16	6
Taff Vale Railway	24	4	65,687	0	0	26,235	0	0
Ulster Railway	25	0	43,820	10	11	2,912	0	11
Wilsontown, Morningside, and Coltness	8	5	5,673	4	8	1,399	16	6
York and North Midland Railway	157	1	155,635	10	10	21,074	18	8

of Railways to 1845.—No. 15.

Statistics of the construction of Railways to the year 1845, and as so
it may be difficult hereafter to ascertain the cost of some of them.

Parliamentary expenses, including the whole sums expended in getting the Act under which the Line has been made.		Sums expended on the Construction of the Works.		Cost of Rails.		Machinery, such as Locomotive Engines, Carriages, Trucks, &c., for the conveyance of Goods and Passengers.		Total Cost of Construction to 1845.	
£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
7,991	2 3	71,394	0 0	23,127	0 0	17,347	0 0	139,751	7 7
10,046	0 0	51,702	11 5	18,841	2 3	13,966	12 9	104,572	14 8
27,077	2 8	799,678	14 11	182,893	17 1	121,470	12 6	1,289,952	10 9
1,876	2 3	17,374	16 4	9,102	16 10	3,550	5 3	35,393	11 7
28,738	18 4	395,237	8 9	43,396	4 6	.....	.....	707,874	0 0
22,612	18 3	226,311	17 2	46,956	17 3	38,835	19 11	458,127	19 8
26,738	0 0	356,112	0 0	67,957	0 0	63,923	0 0	604,638	10 0
3,047	2 0	94,266	16 2	27,715	3 6	16,246	10 0½	154,850	9 4½
.....	.....	.....	.....	.....	.....	.....	.....	115,000	0 0
9,519	11 7	147,748	19 7	23,639	12 2	78,190	13 2	264,796	4 3
45,190	0 0	1,863,717	0 0	212,615	0 0	119,878	0 0	3,100,000	0 0
10,913	0 0	163,480	0 0	12,000	0 0	12,520	0 0	287,873	0 0
.....	.....	.....	.....	.....	.....	120,845	18 3	1,118,029	15 11
180,194	5 7	2,500,837	9 1	314,502	6 6	386,210	13 8	3,974,757	4 5
2,902	19 7	60,859	11 5	14,287	0 0	13,826	11 11	97,498	5 1
116,480	0 0	3,849,921	0 0	1,119,657	0 0	633,668	0 0	6,634,312	0 0
6,000	0 0	.....	.....	34,288	0 0	8,300	0 0	188,000	0 0
5,622	13 6	65,417	4 2	13,587	18 8	19,592	14 6	116,651	1 5
38,231	0 0	312,007	0 0	79,149	0 0	92,435	0 0	685,130	0 0
3,076	7 0	92,689	1 7	11,234	15 6	12,055	9 6	139,505	16 9
72,869	0 0	4,133,745	0 0	499,246	0 0	16,682	2 9	132,903	4 9
54,055	13 4	369,483	8 9	15,304	8 10	349,133	0 0	5,904,336	0 0
197,053	7 11	1,847,783	4 6	171,618	19 0	77,175	3 7	1,078,761	6 3
41,965	14 0	1,399,665	8 4	217,748	10 0	190,058	8 6	2,867,875	16 8
160,916	16 8	951,293	1 8	110,655	4 10	199,971	10 8	2,198,915	16 3
4,565	5 8	476,338	16 3	28,022	19 3	169,555	2 1	1,999,566	2 2
54,931	18 5	2,032,757	10 6	189,103	4 2	52,001	2 5	647,786	1 7
7,118	0 0	251,064	0 0	28,303	0 0	286,181	13 3	3,150,246	12 1
8,683	3 9½	92,431	15 6½	49,396	14 1½	27,221	0 0	372,752	0 0
13,612	0 0	387,570	0 0	45,111	0 0	24,128	3 5½	195,684	9 8
6,770	3 7	701,710	18 8	140,609	14 5	96,842	0 0	1,298,301	0 0
3,610	11 7	165,504	14 6	16,470	19 0	99,203	14 11	1,201,185	16 6
.....	.....	.....	.....	.....	.....	20,229	8 6	243,136	5 10
1,100	0 0	225,083	0 0	.....	.....	2,200	0 0	31,000	0 0
36,158	5 10	668,237	7 3	108,101	18 16	41,803	0 9	1,034,749	8 3
23,621	5 11	193,194	1 9	52,627	12 11	.....	.....	410,883	5 7
7,839	18 7	152,983	13 7	12,538	3 3	9,980	0 0	208,771	3 7
47,930	4 7	2767,675	19 4	.....	.....	62,239	10 7	1,067,339	3 4
7,230	17 5	93,725	18 9	17,941	17 4	10,318	6 8	144,155	9 4
71,417	6 4	2,027,525	7 11	280,352	19 0	393,026	3 0	3,867,253	5 3
11,352	7 2	172,473	6 0	19,061	17 0	17,649	16 6	230,007	3 8
28,138	0 0	368,718	0 0	46,363	0 0	46,906	0 0	612,142	0 0
6,868	6 7	284,642	11 2	29,307	0 5	33,969	1 1	347,918	12 8
1,415	17 1	59,319	11 1	10,569	11 7	3,003	8 1	81,381	9 0
42,688	1 3	568,624	19 7	213,126	9 11	164,673	7 10	1,632,868	17 10

Railway Debentures and Loan Notes, 1843 to 1847.—No. 16.

Parliamentary Return, No. 71, dated 20th March, 1848, gives the following as the amounts due by Railway Companies on Debentures, Loan Notes, or any other Securities bearing Interest at the end of 1843, and of each subsequent year.

1843. Amount.	1844. Amount.	1845. Amount.	1846. Amount.	1847. Amount.
£ 22,052,151	£ 24,541,407	£ 25,048,388	£ 32,006,751	£ 40,768,765

Railway Share Capital, 1843 to 1847.—No. 17.

Parliamentary Return, No. 71, dated 20th March, 1848, gives the following as the amount of Share Capital actually paid up at the end of 1843, and of each subsequent year.

1843. Amount.	1844. Amount.	1845. Amount.	1846. Amount.	1847. Amount.
£ 43,463,641	£ 47,810,160	£ 63,399,912	£ 94,171,020	£ 126,149,476

French Locomotive Manufactories, in 1838.—No. 18.

At a meeting of the proprietors of the Paris and Rouen, and Rouen and Havre Railways, held in London, 9th June, 1848, Mr. Locke, M.P. stated—

“On visiting the workshops of Paris, in 1837 and 1838, I found that in France they could not even make Locomotive engines, and that the St. Germain's line was worked by English drivers, at double the ordinary wages.”

And he also said—

“That when the Paris and Rouen was first opened nine years ago, he exerted himself greatly in forming a Locomotive establishment, and in improving the then low state of manufacturing industry in France. Then the French could not manufacture their own Locomotives; nor, indeed, could the Paris and Rouen have been worked at all, had it not been that he induced a number of English workmen to go over and establish themselves there as engine-makers and drivers. The result had been that they had worked the Paris and Orleans at a cost of 95 centimes per kilometre instead of at 170 centimes per kilometre, and the only return they were receiving now was the expulsion of these very British engine-drivers who had been of such eminent service in the development of their manufacturing industry.”

Pickford's Manchester and London Van.—No. 19.

It may be well to record the rates charged and money earned by Messrs. Pickford and Co.'s Van, which ran daily between London and Manchester; and those who now complain of Railway monopoly and high rates would do well to consider that Railways have reduced the rates between London and Manchester from 23s. 4d. to 3s. 6d. per cwt. for silk goods; 2s. 1½d. for Manchester goods, and 1s. 6d. for cotton, wool, or grain and flour. The yearly earnings were as follows:—

	£	s.	d.		£	s.	d.
1818.....	23,039	6	2	1822.....	22,615	16	6
1819.....	23,532	5	9	1823.....	23,423	4	6
1820.....	25,260	2	7	1824.....	23,653	15	6
1821.....	24,384	14	4	1825.....	23,835	13	9

In July, 1822, rates were lowered from 23s. 4d. to 20s. per cwt., for goods from Manchester to London, and from London to Manchester from 20s. to 18s. 8d.; and on the 19th February, 1825, an opposition Van commenced running between Manchester and London, called the "Association Van," which, on the 9th April, reduced the rates to 16s. per cwt.; on the 12th January following, Messrs. P. and Co. bought the stock, &c., of this opposition. The Van was extended to Liverpool on the 6th December, 1819.

Government and Private Enterprise.—No. 20.

A money article of the "Times" in March, 1847, states as follows:

"A striking instance of the disadvantageous results of government undertakings, as compared with those of private enterprise, is furnished in the extracts published from the Indian papers, regarding the construction of the Ganges canal. It appears that the original estimate for this work (which we believe is intended not for purposes of transit, but exclusively for irrigation) was £230,000, and that it was sanctioned by the court of directors in 1841. Afterwards it was discovered that the cost would approach £1,000,000; but, as it would enable the cultivation of above eight millions of acres of hitherto barren land, and avert the visitations of famine to which a large population throughout the district are periodically liable, the outlay, even at the latter amount, seems hardly a matter for consideration. No sooner, however, had the undertaking been resolved upon, than attention was distracted from it by the war in which the government then found themselves engaged, and consequently for six years the project has been almost abandoned, or, at least, limited to such progress as could be achieved by an unwilling outlay of about £20,000 a year. If, on the other hand, the scheme had been confided to a private company, it would steadily have progressed towards completion, since the capital would have been raised irrespective of any political causes that might affect the revenue of the country, or divert the energies of the government. Happily the intention now appears to be to proceed at a rate that shall bring the work to completion within four years from the present time, but this consummation must still of course be regarded as conditional upon the absence of all untoward events in a country where it is impossible from one hour to another to rely upon the continuance of peace."

Coals, Cinders, and Culm Exported, 1840 to 1847.—No. 21.

The following is extracted from Parliamentary Return, No. 341, for 1848, and gives an account of the total quantities of Coal, Cinders, and Culm Exported from the United Kingdom to all parts of the world in each year from 1840 to 1847, both inclusive; distinguishing the quantities Exported to Cuba, Chili, Peru, Columbia, the United States, France, Spain, Norway, Sweden, and Russia respectively, from those Exported to all other parts.

COUNTRIES TO WHICH EXPORTED.	QUANTITIES OF COALS, CINDERS, AND CULM EXPORTED FROM THE UNITED KINGDOM.									
	YEAR 1840.	1841.	1842.	1843.	1844.	1845.	1846.	1847.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		Tons.
Cuba	8,173	13,918	35,633	15,221	14,844	13,218	17,358	19,049		19,049
Chili	2,937	4,575	1,877	1,840	8,219	15,149	8,664	9,690		9,690
Peru	275	2,288	340	301	2,277	5,108	3,067	4,320		4,320
Columbia	29	10	50	900	273	216	320	108		108
United States of America	77,559	52,273	60,836	83,948	29,822	58,391	45,536	46,188		46,188
France	394,934	451,003	515,975	462,941	412,902	647,967	670,035	641,010		641,010
Spain and the Canaries	13,952	87,320	53,548	64,009	74,836	101,356	104,298	97,509		97,509
Norway	13,757	16,894	18,800	18,951	22,188	33,036	31,439	32,753		32,753
Sweden	21,532	26,941	37,995	25,961	26,661	34,664	31,085	26,589		26,589
Russia	93,370	77,152	83,563	116,041	94,144	150,422	138,485	106,378		106,378
All other Parts	979,775	1,167,920	1,190,848	1,126,098	1,069,066	1,471,765	1,480,833	1,497,577		1,497,577
TOTAL	1,606,313	1,848,294	1,999,504	1,866,211	1,764,171	2,531,282	2,631,108	2,483,181		2,483,181

Turnpike Trusts in 1846.—No. 22.

Parliamentary Return, No. 57, dated 23rd February, 1849, gives the following as the amount of the Bonded or Mortgaged Debts on Turnpike Trusts and of Unpaid Interest in England and North Wales, arranged according to the largest amount of Debt and Interest, and showing in England and North Wales the number of Turnpike Trusts, the length of Turnpike Roads, Receipts and Expenditure in 1846.

	England.	Anglesey.	Carmarvon.	Dorsetshire.	Flint.	Monmouth.	Montgomery.	Total.
Number of Trusts	1007	9	4	4	13	7	6	1102
Length of Road	14,410 0	111 0	178 0	100 0	200 4	264 7	426 3	21,310 0
Debt	1,000,000	1,144 10	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000,000
Interest	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0
Receipts	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0
Expenditure	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0
Unpaid Interest	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0
Total	1,000,000	1,144 10	1,000 0	1,000 0	1,000 0	1,000 0	1,000 0	1,000,000

Acts of Parliament.—No. 23.

Parliamentary Return, No. 15, for 1849, gives the total number of Acts passed in each Session since the year 1800 distinguishing the number of Public, Private, and Local and Personal.

YEAR.	SESSION.	Public Acts.	Local and Personal and Private Acts.	—	TOTAL.
1801 ..	41 Geo. 3.	109	146	..	255
1801-2 ..	42 Geo. 3.	120	119	..	239
1802-3 ..	43 Geo. 3.	162	147	..	309
1803-4 ..	44 Geo. 3.	110	89	..	199
1805 ..	45 Geo. 3.	129	119	..	248
1806 ..	46 Geo. 3.	158	147	..	305
1807 ..	47 Geo. 3, s. 1 ..	56	43	..	99
1807 ..	47 Geo. 3, s. 2 ..	78	134	..	212
1808 ..	48 Geo. 3.	152	157	..	309
1809 ..	49 Geo. 3.	129	192	..	321
1810 ..	50 Geo. 3.	119	218	..	337
1811 ..	51 Geo. 3.	128	221	..	349
1812 ..	52 Geo. 3.	165	212	..	377
1812-13 ..	53 Geo. 3.	162	216	..	378
1813-14 ..	54 Geo. 3.	190	233	..	423
			Local and Personal Acts.	Private Acts.	
1814-15 ..	55 Geo. 3.	196	100	71	367
1816 ..	56 Geo. 3.	142	87	47	276
1817 ..	57 Geo. 3.	132	76	38	246
1818 ..	58 Geo. 3.	101	87	39	227
1819 ..	59 Geo. 3.	138	128	49	315
1819-20 ..	60 Geo. 3 & 1 Geo. 4	14	6	..	20
1820 ..	1 Geo. 4.	119	90	50	259
1821 ..	1 & 2 Geo. 4.	123	128	45	296
1822 ..	3 Geo. 4.	127	114	36	277
1823 ..	4 Geo. 4.	100	126	29	255
1824 ..	5 Geo. 4.	115	160	40	315
1825 ..	6 Geo. 4.	134	202	59	395
1826 ..	7 Geo. 4.	79	142	46	267
1826-7 ..	7 & 8 Geo. 4.	75	112	61	248
1828 ..	9 Geo. 4.	95	122	45	262
1829 ..	10 Geo. 4.	63	136	50	249
1830 ..	11 Geo. 4 & 1 Will. 4	75	138	50	263
1830-1 ..	1 Will. 4.	27	70	7	104
1831 ..	1 & 2 Will. 4.	60	76	22	158
1832 ..	2 & 3 Will. 4.	127	113	34	274
1833 ..	3 & 4 Will. 4.	106	122	30	258
1834 ..	4 & 5 Will. 4.	96	96	36	228
1835 ..	5 & 6 Will. 4.	84	112	27	223
1836 ..	6 & 7 Will. 4.	117	138	35	290
1837 ..	7 Will. 4 & 1 Vict.	91	133	43	267
1837-8 ..	1 & 2 Vict.	129	102	35	267
1839 ..	2 & 3 Vict.	97	107	46	250
1840 ..	3 & 4 Vict.	113	131	36	280
1841 ..	4 & 5 Vict.	61	114	47	222
1841 ..	5 Vict.	11	..	2	13
1842 ..	5 & 6 Vict.	123	113	40	276
1843 ..	6 & 7 Vict.	99	110	29	238
1844 ..	7 & 8 Vict.	113	108	34	255
1845 ..	8 & 9 Vict.	130	204	33	367
1846 ..	9 & 10 Vict.	117	402	43	562
1847 ..	10 & 11 Vict.	115	297	35	447
1847-8 ..	11 & 12 Vict.	133	163	22	318

No record is kept of the number of Acts passed relating to Great Britain, England, Scotland, Ireland, and the United Kingdom respectively.

Coal Statistics.—No. 24.

In the year 1772, Thomas Pennant gave, as a grand feature in the national commerce, that 351,890 chaldrons of coal's were shipped that year at Newcastle; of which about 260,000 chaldrons formed the London supply. But this was before the accelerated march of iron-works, steamers, railroads, gas-lights, and other coal-consuming crafts had obtained; and when, as he says, Preston was "a neat and handsome town, quiet, and entirely free from the noise of manufactures." Now this wonderful acceleration may be seen by the following statement of only the London consumption of late, as derived from evidence taken before the Lords' Committee:—

Year.	Chaldrons.	Population.	Chaldrons per head.
1801.....	859,738.....	818,129.....	1·050
1805.....	944,910.....	873,125.....	1·080
1810.....	1,051,375.....	939,620.....	1·118
1815.....	1,117,034.....	1,029,379.....	1·090
1820.....	1,380,114.....	1,124,704.....	1·180

Here, in round terms, we have a mean annual rate of about two per cent. per annum in the increase, a rate which has accelerated largely in the last twenty years. In 1835, the quantity of coals brought into the port of London was 2,298,812 tons, which were conveyed in 7,958 ships, of which 3,897 were from Newcastle, and 2,182 from Sunderland. The progression since is—

	1840.	1846.
Coastways	2,566,899.....	2,920,367
Canals	22,188.....	33,629
Total.....	2,589,087.....	2,953,996

From a calculation made on the ingenious Mr. Taylor's assumption, but not by him, it seems that we annually ransack Mother Earth for coals to an amount which cannot be under thirty millions of tons! Here are the official items for the year of our Lord 1835:—

	Tons.
Coals carried coastways from the Tyne, the Wear, and the Tees....	4,368,144
Local consumption	873,629
	5,241,773
Treble the above, for average assumed on Mr. Taylor's principle....	15,725,319
Consumed by iron works and mines	6,000,000
Consumed by Great Britain	21,725,319
Shipments to Ireland	1,200,000
Waste by screening	6,628,260
Total for home.....	29,553,570
Colonial and Foreign Exports	738,000
Great Total	30,292,170

The annual production of coal in different coal-producing countries:—

	Tons.		Tons.
Great Britain	31,500,000	United States	4,400,000
Belgium.....	4,960,077	Prussia.....	3,500,000
France	4,141,617	Austria.....	700,000

The estimated value of the coal annually raised in Great Britain is £9,500,000.

That of Belgium, France, and the United States, is each about £1,500,000. The coal trade of the latter country is, however, yet in its infancy; there being 133,132 square miles of coal formation, while Great Britain possesses only 11,859 square miles.

The North Wales coal field, measuring from the point of Ayr, in Flintshire, to a few miles beyond Oswestry, in Shropshire, covers an area of 200 square miles, of ten yards in thickness. The weight of a cubic yard of compact coal is 19 cwt. 16 lbs. The total weight of the coal in this extensive area will thus be 5,929,690,000 tons. These coals at 6s. per ton at the pit mouth would produce £1,778,907,000. To exhaust this field it would require that 2,000,000 tons be worked annually for nearly 300 years. The extent of the other coal fields in England and South Wales, estimated at the same thickness as the North Wales fields, would yield 177,890,700,000 tons, which would furnish us with 40,000,000 tons of coal for nearly 4,000 years.

The annual consumption of coal in the Swansea, or South Wales district, is 4,350,000 tons; of this quantity 1,550,000 tons are consumed in iron works, and 550,000 tons in copper and tin works.

The amount of Welsh coal and culm brought to London has increased 145 per cent. in the last nine years. Scotch coal has, on the contrary, decreased 100 per cent., whilst the augmentation in English coal has been 26 per cent.

In 1615, 400 sail were employed in the coal trade, one-half of which number supplied the demand of London. In 1703, 600 sail were employed for London alone; in 1841, 6,873 collier brigs were employed in the home and foreign coal trade of the Northern coal field only. In 1840, the tonnage of colliers on the Thames amounted to 2,628,323 tons. In 1825, there were 6,564 ship's cargoes entered for duty at London; in 1845, there were 11,987; in 1846, there were 10,488.

The largest quantity sold in the London market in one day, took place on the 21st of October, 1844, on which occasion 282 cargoes, amounting to upwards of 80,000 tons, which, at 20s. per ton (the average price at that period), would give £80,000 for this one day's business. Since that date the price of coal has diminished,—now averages about 16s. per ton.

Resistance to Railway Trains.—No. 25.

In an article by Mr. D. Gooch, read before the Institution of Civil Engineers, 18th April, 1848, the following results were detailed:—

"He arrived at the conclusion that in practice the friction of the axle journals was not a constant quantity at all speeds, and thought that the number and diameter of the wheels in a train, in proportion to the weight, should form elements in any general formula. He showed by experiments that the total atmospheric resistance to a train weighing fifty tons differed but slightly from that to a train of one hundred tons weight, if the carriages were small and the train long in the one case, and the reverse in the other case. The general result of the diagram of resistance with trains of one hundred tons and with fifty tons showed that the resistance calculated by the narrow-gauge formula with a fifty ton train, at 62½ miles per hour, was 37 lb.; with a train of one hundred tons, by the same formula, at 61 miles, it was 31½ lb. The broad gauge resistance, with a train weighing fifty tons, at 62½ miles per hour, was under 2½ lb.; and with a train weighing one hundred tons, at 61½ miles per hour, was 22½ lb."

Coffee.—No. 26.

The following is a statement showing the quantities of Coffee Imported into the United Kingdom from the British Possessions in the West Indies, India, Ceylon, and from all Foreign countries; and the quantities taken for Consumption at each Rate of Duty; together with the Total Revenue derived therefrom, in each year from 1820 to 1848.

Years.	IMPORTATION.				CONSUMPTION.				REVENUE.	
	British West Indies	British East Indies	Ceylon.	Mauritius.	All other Parts.	Total.	Lowest Duty.	Medium Duty.	Highest Duty	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1820	99,989,317	5,497,721	....	....	13,401,688	48,841,626	6,816,033	285,945	1,431	7,103,409
1821	23,515,880	1,904,021	....	....	17,317,959	46,237,869	7,886,060	206,177	3,416	7,993,001
1822	30,838,367	4,487,559	....	....	8,086,899	44,003,124	7,494,218	171,717	8,416	7,669,351
1823	30,181,038	4,114,289	....	....	10,808,046	45,063,373	8,218,342	235,697	881	8,454,920
1824	34,987,294	5,760,912	....	....	9,926,043	50,674,249	7,947,890	313,513	1,540	8,262,948
1825	25,075,835	4,315,290	....	....	23,068,394	52,507,518	10,522,476	457,475	2,849	11,082,970
1826	34,881,824	5,320,354	....	....	11,464,925	42,017,103	12,409,000	791,570	2,753	13,203,323
1827	29,189,746	5,872,511	....	....	12,875,790	47,938,047	14,457,968	888,198	1,210	15,566,376
1828	29,840,785	7,350,492	....	....	8,848,454	41,069,731	16,151,239	973,410	2,984	17,157,633
1829	26,892,628	6,350,647	....	....	5,873,040	39,071,215	18,455,407	974,576	6,197	19,476,180
1830	37,429,144	7,066,199	....	....	6,456,820	40,952,163	21,697,965	949,585	3,971	32,691,522
1831	30,115,381	7,866,500	....	....	15,904,927	43,007,828	21,501,965	1,234,721	8,940	22,740,627
1832	24,642,800	10,970,026	....	....	14,613,023	50,225,389	20,064,301	1,970,635	17,591	22,959,527
1833	18,833,880	6,219,299	....	....	9,373,980	34,421,109	20,941,194	1,799,319	1,471	22,741,944
1834	22,091,470	5,540,753	3,837,391	....	10,856,766	41,865,111	22,224,073	1,557,604	2,418	23,786,095
1835	14,883,470	3,312,713	1,876,143	....	8,086,871	28,398,493	17,229,716	5,363,201	2,126	23,295,046
1836	18,903,476	4,487,637	6,026,504	19,185	5,717,785	34,004,487	19,536,453	5,419,004	2,254	24,947,690
1837	15,377,888	3,416,992	7,389,921	68	11,028,435	36,412,514	23,145,281	3,198,511	3,169	26,346,961
1838	17,688,650	3,340,481	4,946,356	50,625	14,000,162	39,932,279	22,456,273	8,801,269	8,191	25,765,673
1839	11,485,675	20,840,726	4,097,214	99,321	4,471,150	41,003,316	19,041,842	8,667,121	80,982	26,788,945
1840	12,797,039	30,323,860	8,244,816	292	12,684,759	70,250,766	14,495,396	14,150,889	77,489	28,724,735
1841	9,927,669	20,431,349	7,099,343	61,698	5,798,584	41,817,762	17,512,448	10,883,969	51,676	28,421,093
1842	9,091,646	8,021,451	11,184,024	69,075	12,100,218	41,444,414	17,299,919	....	11,283,115	28,583,031
1843	8,330,101	4,320,125	9,616,619	591,864	16,003,950	38,942,469	20,130,630	....	9,900,792	30,031,422
1844	9,291,278	4,320,247	10,971,985	1,761	17,689,909	46,531,188	19,535,624	....	11,857,601	31,394,223
1845	6,383,979	6,651,613	15,637,454	103,711	21,692,107	50,377,315	20,792,559	....	13,525,295	34,318,093
1846	6,397,704	3,383,008	17,385,466	1,537	24,485,367	51,813,631	27,761,190	....	13,031,571	36,793,061
1847	6,770,792	2,478,935	27,190,024	83,808	18,860,484	55,394,044	27,007,440	....	10,438,924	37,441,573
1848	5,155,052	2,519,271	30,631,810	43,979	18,840,419	57,061,431	30,146,707	....	6,959,585	37,106,292

Goods Warehouse, Camden Town, London.—No. 27.

In Messrs. Pickford's receiving-shed, which is 300 feet in length by 217 in breadth, there are in operation, for the purpose of rapidly loading and unloading goods—

- | | |
|-------------------|---------------------------------|
| 24 steam-cranes, | 1 steam-doller or lift, |
| 21 wooden cranes, | 1 travelling-crane on the roof, |

1 steam-capstan for hauling trucks along rails to the various loading bays.—We observed also at work 4 steam hay-cutters, which cut 200 trusses in four hours, and 1 steam hay-cleaner. The above machines are worked simultaneously by an engine of 16-horse power, which also raises from an Artesian well, 380 feet deep, water, which is given warm to 222 horses in adjoining stables. These horses are all named, and branded with a number on their hoofs. In the general receiving-shed of Messrs. Chaplin and Horne there are also a series of cranes, with large stables full of horses that work about twelve hours a-day; the "Weights of Goods allowed to be taken by them in each Vehicle," being as follows:—

FROM CAMDEN.

	Tons. Cwts.			Tons. Cwts.	
4 Horses.....	5	0	Not to exceed	6	0 waggons.
3 Do.	4	0	Do.	4	10 vans.
2 Do.	3	0	Do.	3	5 do.
1 Do.	1	10	Do.	1	15 carts.

By the very great powers committed by the Company to their two agents, 50 waggon-loads of merchandise, collected and brought by spring-waggons to Camden Station, have often, within two hours, been despatched by the superintendent to the manufacturing districts.

Messrs. Pickford's establishment, on account of the London and North-Western Railway, is as follows:—

Clerks.	Porters.	Horses.	Vans.	Waggons.	Drays.
234	538	396	82	57	25

The weights carted by Messrs. Pickford, on account of the Company, for the year ending the 30th June last, amounted to—

	Tons.	cwts.	qrs.	lbs.
Collected.....	133,437	18	0	15
Delivered.....	139,898	19	0	5
Making a gross total of	273,336	17	0	20

Or rather more than 841 tons per day.—*Quarterly Review*, December, 1848.

Charge for Telegraphic Messages on the Midland Railway in December, 1848.—No. 28.

Communication may now be made by the telegraph to and from Leeds, Northampton, Sheffield, Derby, Rugby, Tamworth, Birmingham, Nottingham, Newark, and Lincoln, at the following rates, namely:—under ten words, 1d. per mile; above ten and under twenty, at 1½d. per mile; above twenty and under thirty, at 3d. per mile; and for every additional ten words, ½d. per mile. A messenger, if required, may be dispatched from any of the above stations, on foot, at 1s. per mile; or if by post chaise, on a reasonable remuneration. In case of any message falling through the defect of the instrument or neglect of the company's servants, the money will be returned. Messages relating to luggage lost or mislaid by the company's servants will be sent free of charge.

Directors' Opinion of the Late George Stephenson.—No. 29.

The following is an extract from the minutes of the Liverpool Board of the London and North Western Railway, under date 6th September, 1848 :—

"The public papers having announced the lamented death of Mr. G. Stephenson, on Saturday, the 12th ult., resolved unanimously, that the Directors embrace this first opportunity of recording the strong sentiments which they entertain of admiration for the talents, and esteem for the character, of a man whose death they cannot but regard as a national loss. The directors, on the present occasion, look back with peculiar interest to their first connection with Mr. Stephenson, in the construction of the Liverpool and Manchester Railway—to a period now twenty years past, when he floated their new line over Chat Moss, or cut his way through the rock cutting at Olive Mount. Tracing the progress of railways from that first beginning to the present time, they find Mr. Stephenson foremost in urging forward the great railway movement; earning and maintaining his title to be considered, before any other man, the author of that universal system of locomotion which has effected such mighty results, commercial, social, and political, throughout the civilised world. Two years ago, the directors entrusted to Mr. Gibson, of Rome, the duty and privilege of producing a statue that might do honour to their friend, then living amongst them. They did not anticipate that on the completion of this work of art the great original would be no more; that they should be constrained to accept the marble effigy of the engineer, in lieu of the living presence of the man. Resolved—that a copy of this resolution be transmitted to Mr. Robert Stephenson, with an expression of the directors' earnest sympathy under the irreparable loss which he has experienced."

And at a meeting of the Eastern Counties Railway, held 17th August, 1848, the Chairman, Mr. Hudson, M.P., said :—

"But for my anxiety to meet you to-day, gentlemen, it would have been my mournful duty to pay the tribute due to departed worth, in following to the tomb the remains of my respected friend, Mr. George Stephenson, a man whose genius has benefited not the rich only, but the poor also, in opening up the means of obtaining cheap fuel and locomotive facilities; a man who deserves—if any one may—the title of being a benefactor of his species. The departure of such a man is to be deplored as a national calamity; and railway shareholders have a special cause of regret, for if it had pleased God to spare him, as we might have hoped, no one could have been more pleased than himself to see them receive a due return for the investment of their capital in those great undertakings which his genius and enterprise did so much to call into existence."

And at a meeting of the Midland Railway, held 19th August, 1848, Mr. Hudson remarked :—

"This was almost the first meeting of their proprietors at which they had not had the presence of him whom history would record as a great and distinguished man, and who had so lately been called to the tomb of his fathers. They had almost always had his friend Mr. Stephenson present to witness their proceedings, and to testify to the interest he felt in their undertaking. But it had pleased God to deprive them of him at a time when his friends looked forward to have the pleasure of his society for many years. They must all feel that it was a great alleviation to the affliction of his sorrowing friends that he had left behind him a

memory that princes might be proud of, and that the most distinguished man living would be proud to exchange his fame for that which would surround the name of George Stephenson. He had left behind him the character of an honest man, of a sincere and warmly attached friend, of an affectionate husband, and a kind father. He could not close the present meeting without expressing the deep sympathy which he was sure they must all feel with the friends of the deceased for the bereavement they were suffering, and their sense of the high estimation in which his character and works would live in after ages in the memory of his countrymen. He trusted that they would all emulate the character which his friend had bequeathed to those who were following him."

Value and Duration of a Goods Waggon.—No. 30.

The average duration of a railway goods waggon is estimated to be twelve years, and the cost £70.

	£	s.	d.
Average annual deterioration	5	16	8
Interest on capital, £70, at five per cent.	3	10	0
Average annual cost of repairs	4	0	0
Total	13	6	8
The average run of a waggon is about forty miles per day, which at $\frac{1}{4}$ d. per mile, as allowed by railway companies to each other, amounts to 10d. per day, or for 313 working days per year			
	13	0	10
		0	5 10

The apparent loss of 5s. 10d. to any company whose waggons are used by other companies is more than compensated by the demurrage of 3s. per day, which is charged if the waggon is not returned in from three to five days, according to the distance of its last journey, and thus an amount equal to 144 miles' earnings at $\frac{1}{4}$ d. per mile, would be realised by each day's demurrage.

There are waggons in existence that have been at work for eighteen years, and no doubt if waggons are kept in good repair they become almost entirely renewed in the course of years. The average value of waggons throughout England would no doubt not exceed £55 each.

Grease House at Crewe.—No. 31.

On entering "the Grease House," which, contrary to expectation, we found to be as clean as a dairy, we perceived, standing against the walls, three huge casks of Russia tallow, a quantity of yellow palm-oil, several boxes of soda, and a water-cock. On the opposite side there was a small steam-boller for heating two open cauldrons and two wooden cooling vats. This apparatus is constructed for the fabrication of that yellow mixture which our readers have seen bestowed so generously to the axles of the carriages of every train. We had often in vain endeavoured to ascertain its composition, which, from the grease-master, the highest possible authority on the subject, we at last discovered to be as follows:—

200 lbs. of Russia tallow	20 lbs. of soda
70 lbs. of Palm-oil	50 gallons of water.

Besides heating the two cauldrons we have mentioned, large iron pipes pass from the steam-boller to the immediate vicinity of two casks, each containing one ton of sperm oil, which is thus kept constantly fluid, instead of crystallising, as it is prone to do, during cold weather.—*Quarterly Review*, December, 1846.

Charges allowed by Railway Acts.—No. 32.

In addition to what has been said in Salt's "Facts and Figures," pages 77 and 18:—

The want of uniformity in the provisions of the Special Acts will be seen by a comparison of the highest and lowest rates of maximum charges authorised in 1847.

	Lowest Maximum Charge.	Highest Maximum Charge.
ANIMALS PER MILE.		
Horses	3d.	6d.
Cattle	1d.	5d.
Calves and Pigs	0½d.	1½d.
Sheep	0½d.	1½d.
Carriages per mile	2d.	9d.
GOODS PER TON PER MILE.		
Manure	1d.	3d.
Coals	0½d.	5d.
Corn	1½d.	7d.
Cotton and General Merchandise	2d.	7d.
PASSENGERS PER MILE.		
First Class	2d.	6d.
Second Class	1½d.	4d.
Third Class	1d.	2d.

Mr. Hudson's Opinion of Railway Servants.—No. 33.

At a dinner given by the Eastern Counties Railway to their servants on the 1st January, 1847, Mr. D. Waddington, the president of the meeting, stated as follows:—

"No man possessed a kinder heart than Mr. Hudson, nor did any more thoroughly appreciate the value of good officers of the company. He (the chairman) had heard Mr. Hudson express that opinion, by saying that the great secret in conducting a railway was to have good men employed upon it, and to pay them well, in order that they might be induced to remain in their service. To that sentiment he (the chairman), as well as every director of the Eastern Counties, cordially responded. He thought it a sound one, and in pursuance of it they were then assembled."

Spanning the Globe.—No. 34.

An American merchant, bound for Canton, left New York on the 4th April, 1849, in the *Canada* mail steamer, and arrived in Liverpool on the morning of the 19th. After transacting some business in Liverpool and London, he arrived at Southampton by the day mail train on the 20th, and immediately embarked on board the *Ripon* steamer, which was preparing to start for Alexandria with the Indian mail. This gentleman reached his destination about the 15th of June. Thus he travelled from the United States to China, a distance of nearly 15,000 miles, in 72 days. In a little more than two months he traversed the Atlantic and Indian Oceans, and the Mediterranean, Red, and China Seas, called at England, Gibraltar, and Malta, in Europe; Alexandria and Suez, in Africa; and at Aden, Ceylon, Penang, Singapore, and Hong-Kong, in Asia. With the exception of passing through England and Egypt, the whole of his journey was performed by water, in British ships.

Dee Viaduct.—No. 35.

This Viaduct crosses the river Dee, in the vale of Llangollen, at a spot of delightful scenery, and forms part of the Shrewsbury and Chester Railway. It consists of 19 semicircular arches of 60 feet span; and the height from the bed of the river to the top of the parapet at the centre pier is 148 feet. Its length is 1,532 feet. The arches are built with a double ring of arch stones four feet deep, having a broad chamfer cut off each arris; this double chamfered ring being continued down the piers without break to the foundation. There is no projecting or springing course to break the simple and majestic outline of the arch and piers. The piers are thirteen feet thick, and twenty-eight feet six inches long at the springing of the arch; and have a curvilinear batten or slope on the face, which gives strength and graceful form to the whole. The Viaduct is founded on the solid rock, and is built of stone, with the exception of the interior arching, which is of hard fire-bricks. The tint of the stone is warm and beautiful; the quoins or outer rings of the arches and piers are smoothly dressed; all the rest of the work is rough rustic, which conveys to the mind the idea of great strength and solidity. The parapet is set on a bold projecting string-course, supported on dentals; these parts are in single stones smoothly dressed, and give a noble finish to this portion of the design.

The first stone of this great work was laid on the 19th of April, 1846; and the last arch was closed on the 12th of August, 1848; but the ceremony of keying the last arch did not take place till the 25th of August. The construction thus occupied a period of two years and four months. The structure contains upwards of 64,000 cubic yards of solid masonry, and cost about £76,000. It is the largest of its class in the world yet erected; and its cost per cubic yard bears a favourable comparison with that of any similar work yet erected in this country. This vast structure has been quietly and steadily completed without attracting public attention, it being scarcely known beyond the vale which it spans.

The Viaduct has been erected under the direction, and from the design of, Mr. Henry Robertson, the engineer of the Shrewsbury and Chester Railway, who originally laid out this portion of the Railway in November, 1845, and who has now conducted the works to successful completion.

Crewe Workshops.—No. 36.

The Company's workshops at Crewe consist of a Locomotive and of a Coach department. In the manufactories of the former are constructed as well as repaired the whole of the engines and tenders required for the Northern Division, namely, from Birmingham to Liverpool; Rugby to Stafford; Crewe to Holyhead; Liverpool to Manchester; Liverpool, Manchester, and Warrington to Preston; Preston to Carlisle. The total number of miles is at present 360, but the distance of course increases with the completion of every new branch line. In this division there are 220 engines and tenders (each averaging in value nearly £2,900), of which at least 100 are at work every day. Besides repairing all these, the establishment has turned out a new engine and tender on every Monday morning since the 1st of January, 1848. The number of workmen employed in the above department is 1,600, their wages averaging £3,800 a fortnight. The accounts of these expenses, as also a book of "casualties," in which every accident to, as well as every delay of, a train is reported, are examined once a fortnight by a special committee of directors.—*Quarterly Review*, December, 1848.

Railway Property in October, 1848.—No. 37.

At this time no one can predict the FUTURE condition of Railway property with its UNFULFILLED OBLIGATIONS and future contingent liabilities. Old lines are compromised by guarantees on improvident bargains resulting from negotiations, amalgamations, leaseings, purchasing, and victories before parliamentary committees in 1845, enabling companies to make unprofitable branches, &c. The "Economist" of the 21st October, 1848, made the following remarks:—

"Capital has already been subscribed and paid up, or borrowed, for railways completed and in the course of construction, in the United Kingdom, in round figures, to the extent of *two hundred millions*. That sum represents the actual amount expended; but what the shares represented by it cost to their present proprietors, and what amount has been lost by the various parties who have held these shares during their gradual decline of price since August, 1845, it is impossible to say. The best shares are not now worth half their value at that time. In August, 1845, Great Western shares sold for £224, the price is now £71; London and Birmingham then sold for £243, the price is now £101; Midland Counties then sold for £182, the price now is £72; to say nothing of hundreds of inferior lines which then held a high price, and are now worth nothing. On Midland Counties shares, the money which has been actually paid on each share is £100; their present value is £72. On Great Western shares there has been paid of actual capital £90 each; their value now is £71. On Caledonian shares, there has been paid £50 each; their present price is £17. On Manchester, Sheffield, and Grimsby shares there has been paid £35 each; their present price is about £3 each. On North British, there has been paid £25 each; the present price is £12 10s. to £13. On Wilts, Somerset, and Weymouth, there has been paid £40 a share; the price is now £20; and so on through nearly the whole estimate, with some exceptions. In short, according to a careful estimate which has been made of the present market value of railway property in this country, on which *two hundred millions* have actually been expended, it amounts to barely *one hundred and fifty millions*. It is inferred, therefore, that the present depreciation of railway shares represents a loss to the present proprietors of not less than the enormous sum of *one hundred millions*, and upon the actual cost of the works of *fifty millions*, at least. In one of the cases which we have already quoted, in which £40 a share is paid up, with a *guarantee* from one of the largest companies in the kingdom of *4½ per cent. and half profits*, the present price is £20—offering, therefore, on the face of it, a *guaranteed* interest of nine per cent. on any investment made at this moment. A man with £10,000, not content to hold that amount of shares, bought or subscribed for £40,000, borrowing £30,000 on the security of the whole. A margin of £10,000 made the transaction wear the appearance of safety to the banker or money lender; but gradually, as the market fell, the margin wore out, until at length the price came so near to the amount advanced, that the banker was obliged to sell while yet he could do so without a loss. The banker was paid—his customer lost his all, by a fall of only 25 per cent. on his shares. But the numerous and constant forced sales, under these circumstances, by bankers, only aggravated the evil—the market fell still more; and at every stage, the margin upon the shares of new victims of this mischievous principle was worn down, and the market was again and again glutted

with sellers; while the buyers became daily narrowed to a smaller number. This process of forced sales to pay 'calls,' and bankers' advances as their margin of security diminished, has been the active cause of the rapid decline of prices throughout the year; until at length they are forced far below the rates at which abundance of new capital would have come in to their aid for permanent investment, provided only capitalists had confidence in the future condition of these companies."

Traffic on Grand Junction Canal.—No. 38.

The quantity carried along the Grand Junction Canal, which meanders alongside its powerful antagonist, instead of having been drained, as might have been expected, to zero, has, from the opening of the railway in 1836 up to the present period, actually increased as follows:—

Average amount of goods annually moved on the Grand Junction Canal during the three years prior to the opening of the London and Birmingham Railway in 1836	756,894
Average amount of ditto annually moved during the twelve years subsequent to 1836	1,039,333
Amount moved in 1847	1,163,466

—*Quarterly Review*, December, 1848.

Proprietors willing to forego Dividend.—No. 39.

This is so unusual that I wish to record the following extract from the Directors' Report to the shareholders of the Edinburgh and Glasgow Railway, at their meeting 28th March, 1848, and which was sanctioned by the proprietors:—

"But you are also aware that the Caledonian has now opened its line from Edinburgh and Glasgow to Carlisle, and affords another communication between your terminal points. It is, however, ten miles longer, and the gradients and character of the line are so inferior that your directors have no doubt as to the result of competition, should any take place. They trust there will be none, as it is certain to prove most injurious to both; and it will be poor consolation for you to know that your opponents are the greater sufferers. As yet your board has not been able to convince the Caledonian of the evil of this, and therefore thinks it absolutely necessary to be prepared to defend your rights if invaded. Your board, then, is unanimously of opinion that to declare no dividend and carry forward the whole sum earned is, under these circumstances, the safe and prudent course. But there was some doubt whether the shareholders would resolve on such a present sacrifice, though so clearly for their ultimate benefit, and it was feared that such a proposition might create a most injurious amount of disunion. It was therefore thought expedient to hold a private meeting of the larger shareholders, where more full explanations might be given on any point required; and one was accordingly called by circular sent to all holding to the extent of fifty shares—Manchester being fixed on for the place of meeting as most convenient for the greatest number. A report of this meeting has been circulated. From it the shareholders will see that those present, holding a very large proportion of the stock of the company, were all but unanimous in recommending the course now proposed to you, there being only two dissentients. Strengthened by this decision, your board now leaves this matter with you, confident that you will adopt the same conclusion with equal unanimity."

Weight of Cotton Wool Imported.—No. 40.

The following Table shows the quantities of Cotton Wool imported into the United Kingdom from 1815 to 1847 :—

Years.	From the United States of America.	Brazil.	The Mediterranean.	British Possessions in the East Indies.	British West Indies.	Other Parts.	All Parts.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1815	54,407,299	13,104,267	30,466	7,175,243	15,341,197	10,650,674	100,709,146
1816	51,291,997	20,131,581	239,966	6,972,790	12,731,822	3,912,509	95,280,965
1817	60,695,293	16,338,861	44,532	31,007,570	9,743,605	8,473,828	126,303,689
1818	68,217,656	24,987,979	1,109,982	67,456,411	11,249,851	5,723,698	178,745,577
1819	62,412,654	20,860,865	186,864	58,856,261	7,050,753	1,789,757	151,153,154
1820	89,999,174	29,198,155	472,684	23,125,825	6,836,816	2,040,001	151,672,655
1821	93,470,745	19,535,786	1,131,567	8,827,107	7,138,980	2,432,435	132,556,620
1822	101,031,766	24,705,206	518,804	4,554,225	10,295,114	1,732,513	142,837,628
1823	142,532,112	23,514,641	1,492,413	14,839,117	7,034,793	1,989,427	191,402,503
1824	92,187,662	24,849,552	8,699,924	16,420,005	6,269,306	953,673	149,380,122
1825	139,908,699	33,180,491	22,698,075	20,005,872	8,193,948	4,018,206	228,005,291
1826	130,858,203	9,871,092	10,308,617	20,985,135	4,751,070	833,284	177,607,401
1827	216,924,812	20,716,162	5,372,562	20,930,542	7,165,881	1,238,950	272,448,909
1828	151,752,289	29,143,279	7,039,574	32,187,901	5,893,800	1,743,799	227,760,642
1829	157,187,396	28,878,386	6,049,597	24,857,800	4,640,414	1,153,818	222,767,411
1830	210,885,358	33,092,072	3,428,798	12,481,761	3,429,247	644,216	263,961,452
1831	219,333,628	31,695,761	8,460,559	25,805,153	2,401,685	978,067	288,674,853
1832	219,756,753	20,109,560	9,163,692	35,178,625	2,040,428	583,467	286,832,525
1833	237,506,758	28,463,821	1,020,268	32,755,164	2,084,862	1,825,964	303,656,837
1834	269,203,075	19,281,396	1,681,625	32,920,865	2,293,794	1,484,670	326,875,425
1835	284,455,812	24,986,409	8,451,630	41,429,011	1,815,270	2,564,831	363,702,963
1836	289,615,692	27,501,272	8,226,029	75,949,845	1,714,337	3,951,882	406,959,057
1837	320,651,716	20,940,145	9,326,979	51,532,072	1,595,702	3,240,169	407,286,783
1838	431,437,888	24,464,505	6,409,466	40,217,734	1,529,356	3,791,628	507,850,577
1839	311,597,798	16,971,979	6,429,671	47,172,939	1,248,164	5,976,008	389,396,559
1840	487,856,504	14,779,171	8,324,937	77,011,839	866,157	3,649,402	592,488,010
1841	358,240,964	16,671,348	9,097,180	97,388,153	1,533,197	5,061,513	487,992,355
1842	414,030,779	15,222,828	4,489,017	92,972,609	593,603	4,441,250	531,750,086
1843	574,738,520	18,675,123	9,674,076	65,709,729	1,260,444	3,135,224	673,193,116
1844	517,218,622	21,084,744	12,406,327	88,639,776	1,707,194	5,054,641	646,111,304
1845	626,650,412	20,157,633	14,614,699	58,437,426	1,394,447	725,336	721,979,953
1846	401,949,393	14,746,321	14,278,447	34,540,143	1,201,857	1,140,113	467,856,274
1847	364,599,291	19,966,922	4,814,263	83,934,614	793,933	598,587	474,707,615

Duties of Directors.—No. 41.

In a letter from Mr. Ricardo, M.P., Chairman of the North Staffordshire Railway Company, to the manufacturers of the Staffordshire Potteries, dated 9th April, 1849, it is stated :—

“In the view of my colleagues and myself the Directors of a Railway Company are solely and simply the trustees of a commercial undertaking, to the carrying on of which a great number of individuals have subscribed their capital, in many instances investing their whole savings; and we consider that our functions, as their trustees, consist in rendering their property as valuable and as profitable as its resources will permit. And if for any consideration we should neglect this responsibility, or directly or indirectly sacrifice the interest of our shareholders, it would be a downright dereliction of our duty, and we ought not, and probably should not, retain the conduct of the concern.”

Belgian Railways in 1846.—No. 42.

The Railways of Belgium belong to the State, were constructed under its direction, and paid for out of the public revenues. The locomotive and carrying department were also furnished by, and the line is worked by the State. The railways of Belgium were undertaken at a period when peace with Holland and the treaties with the allied powers had secured the independence of Belgium and declared her territory neutral, compelling her to reduce her army to a number consistent with her new position. At that time her rulers wisely provided for the discharged soldiers an occupation alike favourable to the development of her resources and to her permanent improvement, not only furnishing present means of employment for the members of the disbanded army, but also fostering in the people a taste for industrial and peaceful pursuits. In no case could a comparison be fairly made between railway works undertaken at the expense of individuals and those made at the expense of Government. A Government usually possesses a staff and machinery already existing for other objects, but capable of being directed to railway purposes without creating a new and considerable item in the account of railway expenditure. A Board of Works is a department attached to most Continental Governments. The accounts of expenditure are for this reason given always less accurate in the case of a Government railway than in that of any private company; the latter have everything to provide from the beginning, every sheet of paper to pay for, and to engage and remunerate the lowest of their menial servants. Moreover, the Belgian lines being constructed not only with a view to assist the internal traffic of the country, but also to force a transit trade through Belgium able to compete with the water-carriage of Holland, the Government considered a profitable return on the outlay of the capital as a secondary matter. The lines—generally single ones—were cheaply made; the rate of travelling was slow; the passenger-rate low, but the baggage of passengers being paid for in addition to the fares. Within the last year many new lines in Belgium have been conceded to private individuals, chiefly English companies, on lease for ninety-nine years, free from rates and taxes, with permission to charge a higher tariff than that allowed on the Government lines. How far these speculations will answer remains to be seen. The shares of all these new lines are at a considerable discount in the market, and may be bought at prices varying from 50 to 60 per cent. discount on the money paid up.—*Salomons' Railways in England and France.*

Are Railways Public or Private Property?—No. 48.

In the Report of the Directors of the Lancashire and Yorkshire Railway Company, read at the meeting, 6th September, 1848, were the following remarks:—

“They recognise as their primary duty that towards the Proprietors, by whom they have been entrusted with the management of their property and the control of a vast expenditure; and they consider that, so long as they shall comply with the conditions attached to the powers granted by the Legislature, they are bound to make a full and fair remuneration to the Proprietors their main object. Railways are often spoken of, and even openly claimed, as the property of the public; and, unfortunately, have been too often dealt with as such, instead of being regarded in their true light—that of a private commercial enterprise, depending for its success upon the amount of benefit conferred upon the public. If conducted with this view, your Directors are firmly convinced that the undertakings of this Company will deserve and will command an ample return for the outlay.”

Rates Reduced by Railways.—No. 44.

Notwithstanding the great effort made by interested persons to show that Railways are a monopoly, it is quite clear that the public have very much benefited by a reduction of Rates and Tolls caused by the existence of Railways. In the Second Report from the Select Committee on Railways and Canals Amalgamation, it is stated—

“As the Railway system extended itself, improvements in its organization and economy placed in turn a check upon Canals, and the consequent competition materially reduced the expense of conveyance. Instances have been adduced before your Committee in which the charges for the conveyance of merchandise have been lowered by these means to one-seventh of their former amount; and there are now few parts of the country which have not derived material advantage from the competition between Railways and Canals.”

And in the evidence before the same Committee we find that Mr. D. O'Brien stated, on the 23rd April, 1846:—

“I find that the prices of carriage have been materially reduced since the years 1828 and 1829, by the competition between Canals and Railroads. I find that the charge of goods per ton by water between London and Windsor was 9s. The Great Western Railway now carry those goods between those two places at from 5s. 6d. to 6s. The charge by water from London to Reading was 15s.; it is now, by railway, from 7s. to 8s. From London to Oxford by water it was £1 2s., and it now is, by railway, from 10s. to 12s. 6d.”

It was also stated, on the 28th April, 1846, by Mr. J. Sutton, an extensive carrier and opponent to Railways,—

“JOHN WILSON PATTEN, Esq., Chairman.—Will you state to the Committee what has been the reduction of the fares and tolls on the Trent and Mersey since the time when the competition with the Railways commenced?”

" Mr. J. SUTTON.—The reduction has been two-thirds in many cases, whereas 1½d. a ton per mile was the charge some time ago ; to a great extent, that has been reduced to 1d., and it is now, generally speaking, a halfpenny per ton per mile.

" The CHAIRMAN.—That is for coal?

" Mr. J. SUTTON.—Yes."

And Mr. G. H. Betts, on the 28th April, 1846, thus answers a question :—

" JOHN WILSON PATTEN, Esq., Chairman.—Will you state the prices which it is proposed to carry at by Railway, and those which you can carry at by Canal?

" Mr. BETTS.—This is the table :

	Present Cost.		Cost by Railway.	
	s.	d.	s.	d.
COALS.				
Melton Mowbray to Stamford	9	0	2	7
Ditto to Uppingham	7	0	3	5
Ditto to Oakham	3	0	1	2
CORN.				
Stamford to Melton Mowbray	10	0	3	0
Oakham to ditto	5	0	1	7 "

Also, on the same day, Mr. D. Wheatcroft, another carrier and strong opponent to Railways, remarks :—

" The CHAIRMAN.—Have the rates on the Canal been reduced?

" Mr. D. WHEATCROFT.—They have, in consequence of the competition of the Railway.

" The CHAIRMAN.—What Railway?

" Mr. D. WHEATCROFT.—The London and Birmingham, together with the Grand Junction.

" The CHAIRMAN.—What was the original rate charged upon traffic from London to Manchester?

" Mr. D. WHEATCROFT.—70s. to 80s. a ton was the rate charged by the carriers.

" The CHAIRMAN.—What is it now?

" Mr. D. WHEATCROFT.—32s. 6d. to 40s."

And on the 1st of May, 1846, Mr. G. Jackson, a carrier, says :—

" Mr. E. DENISON.—Before any Railways were open, what was the cost of the carriage of goods from Manchester to Hull?

" Mr. G. JACKSON.—About 24s. a ton.

" Mr. E. DENISON.—Then, after the opening of the Railway, it sank down to 10s.?

" Mr. G. JACKSON.—Yes."

Before the same Committee, on the 23rd April, 1846, Sir F. B. Head, Bart., Chairman of the Grand Junction Canal Company, made the following replies :—

"The CHAIRMAN.—Have you a statement in your possession showing the advantages derived by the public from the competition between Canals and Railways up to the present time?

"Sir F. B. HEAD.—I have here a statement of the reduction which has taken place on the Grand Junction and Leicester lines of Canal since the introduction of Railroads.

"The CHAIRMAN.—Will you state at what period that statement commences?

"Sir F. B. HEAD.—In 1836.

[The witness delivered in the same, which was read, as follows:]

"Statement of Reduced Tonnage on Canals from London to Derbyshire, showing the advantages which the public have derived by competition between Railroads and Canals. Thoroughfare.

TONNAGE ON THE UNDER-MENTIONED LINE OF CANALS.

	Rates which they were entitled under their Acts to charge and which they did charge.			Reduced since 1836 to		
	£	s.	d.	£	s.	d.
GRAND JUNCTION, 97 miles....						
On Sundries	0	16	3½	0	2	0½
On Coal	0	9	1	0	2	0½
GRAND UNION, 24 miles.....						
On Sundries	0	6	0	0	0	5½
On Coal	0	2	11	0	0	5½
UNION, 19 miles						
On Sundries	0	4	9	0	0	5½
On Coal	0	2	1	0	0	5½
LEICESTER, 16 miles						
On Sundries	0	2	6	0	0	4
On Coal	0	1	2	0	0	4
LOUGHBOROUGH, 10 miles						
On Sundries	0	2	6	0	0	4
On Coal	0	1	2	0	0	4
EREWASH, 11 miles						
On Sundries	0	1	0	0	0	4
On Coal	0	1	0	0	0	4

N.B.—No general, and scarcely any partial reduction, could be brought about until the competition was established between the rails and the canals.

And on the 28th April, 1846, J. L. Ricardo, Esq., M.P., made the following remarks with reference to the North Staffordshire Railway and the Trent and Mersey Canal:—

"I undertook to promote this Railroad entirely for the benefit of my constituents, who live in the Staffordshire Potteries, as I believe the Committee are aware. I had no other purpose whatever. I believe that the Staffordshire

Wolverton Refreshment Room.—No. 46.

The refreshment establishment at Wolverton is composed of—

1. A matron or generalissima.
 2. Seven very young ladies to wait upon the passengers.
 3. Four men and three boys do. do.
 4. One man-cook, his kitchen-maid, and his two scullery maids.
 5. Two housemaids.
 6. One still-room-maid, employed solely in the liquid duty of making tea and coffee.
 7. Two laundry-maids.
 8. One baker and one baker's-boy.
 9. One garden-boy.
- And lastly, what is most significantly described in the books of the establishment—
10. "An odd-man."

"Homo sum, humani nihil à me alienum puto."

It appears from the books that the annual consumption at the Wolverton refreshment-rooms averages—

182,500 Banbury cakes.	5,110 lbs. of moist sugar.
56,940 Queen cakes	16,425 quarts of milk.
28,200 pâtés.	1,095 " cream.
36,500 lbs. of flour.	17,520 bottles of lemonade.
13,140 " butter.	35,040 " soda water.
2,920 " coffee.	70,080 " stout.
43,800 " meat.	35,040 " ale.
5,110 " currants.	17,520 " ginger beer.
1,277 " tea.	730 " port.
5,840 " loaf sugar.	3,650 " sherry.

And we regret to add,

730 bottles of gin. 731 bottles of rum. 3,660 bottles of brandy.

To the eatables are to be added, or driven, 85 pigs, who, after having been from their birth most kindly treated and most luxuriously fed, are impartially promoted, by seniority, one after another, into an infinite number of pork pies.

Notwithstanding the everlasting hurry at this establishment, four of the young attendants have managed to make excellent marriages, and are now very well off in the world.—*Quarterly Review*, December, 1848. [Most travellers by the London and North Western Railway can bear testimony to the very efficient manner in which the Wolverton Refreshment Rooms are conducted under the excellent management of Mrs. Hibberd, but the public must not conclude that the above statement of articles consumed is correct; it was averaged from one of the best days in the year, and is *much* over-stated.]

Cost of Locomotives.—No. 47.

The average cost of the Locomotive Engines and Tenders, which, for the rails between London and Birmingham, are usually purchased by the Company from makers at Manchester, Warrington, and Liverpool, is—

Cylinder 15-inch diameter	£1,950	0	0
" 16 "	2,113	10	0
" 18 "	2,500	0	0

The Tenders cost £500 each.—*Quarterly Review*, December, 1848.

Railway Bridges in America.—No. 48.

The bridges in the United States, on the best lines, are built of wood, on the truss-work principle, with stone piers and abutments.

On the Boston and Albany lines, and on many others in the New England States, the bridge generally used and approved of is known as "Howe's Patent Truss Bridge."

The cost of this kind of bridge, as furnished by the parties who have purchased the patent, is as follows:—

		Dollars.		£	s.	d.	
For spans of 60 feet, single track, 11 per foot =				2	5	10	sterling.
100	"	18	"	3	15	0	"
140	"	21	"	4	7	6	"
180	"	27	"	5	12	6	"
200	"	30	"	6	5	0	"

The cost for double track would be about 55 per cent. additional.

The price includes the whole of the superstructure ready for the rails, but not the piers and abutments

The bridge over the Connecticut River, at Springfield, is built on this principle; it has seven spans of 180 feet each, and the sill of the bridge is 30 feet above low water. On other lines the same kind of bridge is used, but no iron-work is permitted (the unequal expansion and contraction of this metal is objected to), and the addition of an arch is introduced.

A bridge built on this principle on the Reading railroad, 1,800 feet long, cost 40,000 dollars, equivalent to £8,330 sterling.

Railway Interest on Calls, &c., 1843 to 1847.—No. 49.

Parliamentary Return, No. 71, dated 20th March, 1848, gives the following Return of Interest upon Calls paid up, and of the amount of Interest so paid to Shareholders in each year since 1843, and of the length of Railway belonging to each Company, which was open for Traffic at the end of 1843, and of each subsequent year.

1843.			1844.			1845.			1846.			1847.		
Length.	Length.	Amount.	Length.	Amount.	Amount.	Length.	Amount.	Amount.	Length.	Amount.	Amount.	Length.	Amount.	Amount.
m. ch.	m. ch.	£ s. d.	m. ch.	£ s. d.	m. ch.	m. ch.	£ s. d.	m. ch.	£ s. d.	m. ch.	m. ch.	£ s. d.	£ s. d.	£ s. d.
2027 52½	2296 56½	16,609 15 6	2608 12	106,682 9 4	3083 47	402,780 14 5	3870 14	1,007,864 15 1						

Poultry to London at Christmas.—No. 50.

The Eastern Counties Railway presented an unusual scene on the 24th December, 1846, in consequence of the arrival of extensive trains, carrying baskets, hampers, &c., containing poultry for the London market. By the morning mail train upwards of 2,000 packages were brought to Shoreditch. An afternoon train, which consisted of nearly thirty carriages, carrying between 300 and 400 passengers, arrived considerably after its appointed time. The directors had prudently caused the area immediately in front of the station at the terminus, Shoreditch, to be covered in with a tarpauling for the warehousing and delivery of the goods.

**Extension of the South Western to Waterloo Bridge,
London.—No. 51.**

The South Western was the first of our main trunk lines that has literally lodged itself in London. By means of its Extension adjunct of $2\frac{1}{4}$ miles of line, from Nine Elms to Waterloo-road, it has centralized itself, with its tributaries spreading over an area of 250 miles, almost on the threshold of the Strand, and tends to prove the truth of what Mr. Chaplin set forth at the half-yearly meeting in 1847, when he invited "the proprietors to accompany him, in imagination, by an ordinary train, either from their mercantile office in Cornhill, or which would, probably, be more agreeable, from the Bank, after they had received their dividend in 1848, and, looking through the horoscope of their future prospects, he would proceed with them to the foot of London Bridge, where they would join the trains that were to convey them to the South-west of England, without any of the complicated machinery now involved in the system of omnibuses and cabs. After witnessing the quantities of merchandise shipped and unshipped for all parts of the world in their own wharves,—after seeing the innumerable quantity of passengers coming from all parts of the metropolis, with those arriving by the boats from Chelsea, who, he had no doubt, in 1848, would be conveyed at $\frac{1}{4}$ d. per head per passenger—having placed all these comfortably in the caravansaries destined for the South-west, he would then ask them whether they would prefer going to Southampton *via* Kingston, or by Kew, Brentford, and Isleworth, *via* Richmond. Speculating on the probability of their preferring the Richmond route, he would promise to shoot them off, in some of their best carriages, buoyed along by Beattie's patent wooden wheels, running over the rails noiselessly and without dust, with spring and wire blinds, from Battersea to the Richmond line, in their transit over which they would pass through the pleasant suburban villages of Wandsworth, Putney, Barnes, and Mortlake."

Railways in the World in 1846.—No. 52.

The Railways in operation in the whole world are stated by a French paper to occupy a length of 2,769 geographic miles, or 310,128 kilomètres. Of this number the United States of America possesses nearly one-half. Next comes England, then Germany, then France, and then Belgium. If we compare the length of the lines with the territorial superficies of each of them, the United States is not then at the head of the list, but Belgium, which has a little more than 22 kilomètres of railway per square geographic mile. The United States is, in fact, only the fifth in rank. But a more important comparison must yet be made, that of the extent of rail in each country, with the amount of population. The United States has 75,152 kilomètres (112 kilomètres constitute a mile) to 10,000,000 inhabitants; England, 23,296 to the same number; and Belgium, 17,136 kilomètres in proportion to the same amount of population. Other countries stand in the following order:—Germany, Holland, France, Italy, and Hungary. The cost of constructing all the lines now in existence has been four milliards three hundred million francs. Of course the sum borne by each country is not in strict conformity with the length of the lines nor the obstacles to be overcome. The price of labour, it is well known, varies very much. Thus, France and Great Britain, where labour is sensibly dearer than anywhere else, have expended, and still expend, the highest sums. In England, the cost of construction per mile, or 112 kilomètres, is 3,628,000*f.*; in France, 2,177,600*f.*; in Belgium, 2,052,500*f.*; in Italy, 1,947,500*f.*; in Holland, 1,537,500*f.*; and in Germany, 1,032,500*f.*

Proportion of Third Class Railway Passengers, and average Fare paid by each, in 1848.—No. 53.

NAME OF RAILWAY.	Total Number of Passengers.	Number of 3rd Class Passengers.	Proportion in every 100 passengers of 3rd Class Passengers.
<i>Narrow Gauge.</i>			
London and North Western.....	5,599,734	2,163,384	39
Lancashire and Yorkshire.....	2,889,205	2,090,624	72
South Eastern.....	4,188,732	2,008,230	48
Midland.....	3,618,799	2,366,892	65
Newcastle and Berwick.....	1,187,515	944,891	80
Edinburgh and Glasgow.....	1,147,883	836,025	72
East Lancashire.....	919,222	677,896	74
Eastern Counties.....	2,074,170	1,044,158	50
Arbroath and Forfar.....	124,462	113,545	91
<i>Broad Gauge.</i>			
Great Western.....	2,876,222	419,663	16

NAME OF RAILWAY.	FARES FOR 100 MILES.			
	1st Class.	2nd Class.	3rd Class.	Average Fare paid by each Passenger.*
<i>Narrow Gauge.</i>				
Eastern Counties.....	Pence. 210	Pence. 141·6	Pence. 92·1	Pence. 125·4
London and North Western.....	218·1	144·6	91·4	138·6
London, Brighton, and South Coast.....	263	171	109	150·6
London and South Western.....	245	168	96	166·3
South Eastern.....	214	152	90	131·8
Average Fare paid on Narrow Gauge } Railways†.....	226·7	152·8	97	141·3
<i>Broad Gauge.</i>				
Great Western.....	274·4	187·8	100	188·9
From these figures it appears that the } excess of Broad Gauge over Narrow } Gauge Fares, on the Metropolitan } Railways, is, per cent., on.....	1st Class. 21	2nd Class. 22·9	....	On the average fare paid by the public. 33·7

* That is, dividing the sum total of Fares by the sum total of Passengers.

† In this calculation the average is obtained in the correct manner, viz., by dividing the sum total paid by each class of passengers by the total number of each class travelling.—*Sydney's Commercial Consequences of a Mixed Gauge.*

Completion of Railways in 1848.—No. 54.

It will long be remembered the difficulty of obtaining money to complete Railways for which Acts were obtained during the fever of 1845, and contracted for and commenced afterwards; many conflicting opinions were given at the meetings in 1848, as to

whether they ought to be abandoned or completed. At a meeting of the Lancashire and Yorkshire Railway Company, 6th September, 1848, in reply to Mr. W. Rawson's strong request to abandon the new schemes—

"Mr. HAWKSHAW, the Company's engineer, said he had consulted the Company's legal adviser as to their probable liabilities, in the event of their giving up the lines in progress. To finish the line between Halifax and Bradford would require £6 10s. on the West Riding shares, and £3 15s. on the Extension shares more than what was at present paid on those shares. To abandon the works would require an additional payment on the West Riding shares of £4 2s.; and on the Extensions, of £2 8s. 6d. If the lines were proceeded with, only £1 a share call would be needed during the next twelve months; but if they were abandoned, £2 or £3 would be immediately required. The Directors had already made arrangements by which the making of the lines might, if deemed advisable, extend over a period of four years."

And in a letter from Mr. Hawkshaw to Mr. W. Rawson in the "Manchester Times," 16th September, 1848, Mr. H. remarks:—

"The calculations I had made were without reference to the amount per share called or paid up on the West Riding Union and Extension shares, and were only intended to show that to complete the line *via* Halifax to Bradford there yet remained to be expended an amount equivalent to £6 10s. per share on the West Riding Union shares, and to £3 15s. 10d. per share on the Extension shares; and that to abandon the Halifax and Bradford contract would cost the West Riding Union proprietors £4 2s. per share, and the Extension proprietors £2 8s. 6d. per share; meaning by this that, in my opinion, if the proprietors of those stocks sought the abandonment of the line in question, they ought to be prepared to sacrifice so much of the money contributed by them. When, in answer to a proprietor, I replied that the £4 2s. per share of loss on the West Riding Union stock would require calls to that amount beyond the calls already made, by mistake I took the amount then paid up at £4 2s. instead of at £6."

Duplicate Railways.—No. 55.

In a letter from Mr. W. Rawson to Mr. H. Houldsworth, published in the "Manchester Times," 16th Sept., 1848, it is stated:—

"Duplicate lines, made even in prosperous times, are found to be unremunerative, when made by rival Companies for the mere purpose of shortening the distance."

And in reference to the Manchester, Wigan, and Southport Line, in the same letter, Mr. Rawson says,—

"You have already two lines to Wigan. The one through Bolton belongs entirely to the Lancashire and Yorkshire Company, and that Company are partners in the other line. Pardon me, sir, when I say, that though you have an Act of Parliament which empowers you to raise money for this purpose, I could not have supposed it possible, considering the circumstances in which the suffering shareholders of that Company are placed, and with the knowledge we have that duplicate lines do not pay, that it was in the compass of human folly and recklessness to propose to make a third line to Wigan, at the expense of the Lancashire and Yorkshire Railway Company."

Trade of the Port of London, 1846 to 1848.—No 56.

The number of Ships and their Registered Tonnage that entered the Port of London with Cargoes from Foreign parts in the last three years, and the number that entered the St. Katharine Docks during the same periods.

PORT OF LONDON.

Years.	British.		Foreign.		TOTAL.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
1846	5,228	1,134,646	2,479	393,388	7,707	1,528,034
1847	6,265	1,426,612	3,105	492,344	9,370	1,918 956
1848	6,477	1,384,655	3,052	429,415	9,529	1,814,070
	Increase ships in 1848 over 1847, 212	Decrease in tonnage. 41,957	Decrease in ships. 1848, 53	Decrease in tonnage. 62,929	Increase 1848, 159 ships.	Decrease in tonnage, 104,886 tons.

ST. KATHARINE DOCKS (like periods).

Entered with Cargoes from Foreign Ports.

1846.		1847.		1848.	
Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
673	171,481	742	190,857	649	155,082

The tonnage of ships entered in 1848, light to load, exceeded the year 1847 5,705 tons.

The year of 1847 was one of extraordinary importation of corn, flour, and provisions. The number of vessels laden with those articles that entered the St. Katharine Docks in 1847, was 103, and 37,138 registered ton; if these are deducted from the arrivals in 1847, the shipping and tonnage that entered these docks in 1848 would have exceeded the preceding year.

MERCHANDISE.—ST KATHARINE DOCKS.

	1846.	1847.	1848.
Goods in warehouse, 31st Dec.	61,091 tons.	70,772 tons.	70,152 tons.
Landed during the above years	117,925 tons.	157,720 tons.	122,558 tons.
		of which about 40,000 consisted of corn, flour, and provisions.	

Continental Railways in 1847.—No. 57.

Some statistics regarding the Continental lines place Germany in the van of those who, during the past year, have most cultivated railway communication. France, at the close of the year 1846, maintained in active operation 1,017 miles, which, with the addition of works completed and opened for public use in the course of the following year, constituted at the end of that period a total length equal to about 1,395 miles. At the end of the year 1846 Germany possessed about 2,096 miles, completed and in operation, and in the course of the following year 795 miles additional were opened; so that at the close of 1847 the total extent in

that country amounted to 3,891 miles. Belgium, in December, 1846, possessed 456 miles, and in 1847 the completed quantity of new undertakings was 90 miles, making a length in active operation at the end of the last-mentioned year of 546 miles. The length opened in Holland at the close of 1846 was 168 miles; in 1847 only 15 miles additional were completed, so that at the close of that year about 183 miles were altogether in operation. Denmark at the end of 1847 possessed 158 miles in active operation. Switzerland figures for a small extent. In 1846 not more than 3 miles of line were completed. This was increased in 1847 by the opening of about 15 miles of the Zurich and Bâle, making the total about 18 miles. In Italy at the end of 1847 the length in operation was 183 miles. In 1846 about 159 miles had up to that date been opened. Hungary possessed at the commencement of the present year 165 miles in active work. At the close of 1846 about half that extent had been completed. It is stated that Russia in 1846 had only 20 miles carried out. In 1847 this amount was increased to 51 miles. In the kingdom of Poland 159 miles were completed by the close of 1846. In 1847 a further extent of 54 miles was accomplished, making the total length 213 miles.

Staff of the London and North Western Railway.—No. 58.

The number of persons employed on account of the London and North Western Railway Company, including those occupied in the collection and delivery of goods, is as follows:—

2 Secretaries.
1 Manager.
2 Superintendents.
966 Clerks.
3,054 Porters.
701 Police Constables.
738 Engine and Firemen.
3,347 Artificers.
1,452 Labourers.

Total number 10,263

The number of horses employed is 612

Ditto vans, &c. 253

—*Quarterly Review*, December, 1848.

Are Chairmen of Railways responsible for the acts of the Board?—No. 59.

At a meeting of the Manchester, Sheffield, and Lincolnshire Railway, 9th August, 1848, the Chairman, the Earl of Yarborough, stated—

“I would not consent to sit upon the Board, or have anything to do with the Direction, if I were not thoroughly convinced that the Board meant to act honestly, and to use their best endeavours to carry out the plan in the mode they think most conducive to your advantage. It must be obvious to you, that it can be no advantage to me to have a deal of additional business thrown upon my hands which I need not necessarily undertake. I feel that while I am upon the Board, I am responsible along with the rest of the Directors for the proper administration of the affairs of the Company.”

Property in Upper Canada.—No. 60.

The following Tabular Statement, showing the Annual Amount of all Property in Upper Canada, rateable under Assessment Laws for purposes of Taxation, from the year 1855 to 1847 inclusive. It does not give the actual value of the property, but the value at which it is rated for Taxation under statutes of very early date, and which have remained unaltered. *Wild Land* is valued at 4s. per acre; its average value is fully 18s., as the amount given in the column only includes that in possession of persons, and forming part of their farms. *Cultivated Land* is valued at £1, whereas the lowest average is from £2 10s. to £3 per acre.

Years.	Popula- tion.	LANDS.		Houses of all kinds, except Shanties.	GRAVE MILLS		Merchants' Shops.	Store Houses.	Horses.	Oxen.	Milch Cows.	Young Cattle.	Saw Mills.	Amount of Assessed Value of Property.		Gross Amount of all Local Taxes.	
		Uncultivat- ed, Assessed Value \$1 per acre.	Cultivated, Assessed Value \$1 per acre.		Number.	Additional Run of Stone.								\$	s. d.		
1825	168,027	2,500,304	535,212	8,876	71	456	54	22,589	25,906	51,216	23,501	394	2,256,874	7	810,295	8	2
1826	182,905	2,541,725	544,234	9,732	80	487	57	24,095	26,580	61,954	24,806	422	2,409,064	17	9,940	4	11
1827	182,905	2,626,070	612,607	9,989	262	94	496	58	25,128	67,349	27,918	460	2,442,442	3	11,509	10	6
1828	182,905	2,677,807	678,618	10,183	274	98	548	68	27,303	30,879	32,577	515	2,579,083	3	11,633	12	9
1829	182,905	2,738,777	717,552	11,291	296	102	604	72	28,388	33,451	35,001	555	2,692,369	9	10,122	732	17
1830	200,437	3,244,410	775,014	12,082	273	121	748	91	30,777	33,770	38,909	555	2,929,269	9	21,335	10	6
1831	261,060	3,570,880	819,473	13,605	291	135	787	95	33,197	36,057	43,519	533	3,143,484	10	15,320	10	11
1832	283,333	3,796,014	916,172	14,546	320	152	854	96	36,601	38,941	47,976	571	3,343,822	4	16,583	6	10
1833	320,693	4,171,993	981,953	16,446	307	173	1,025	105	40,249	41,870	50,442	671	3,736,004	4	21,867	5	7
1834	347,068	4,476,368	1,084,816	16,771	328	199	982	123	41,866	42,465	50,474	788	3,916,712	14	219,406	1	5
1835	372,502	4,897,406	1,283,133	20,951	356	227	1,043	133	54,616	48,329	120,584	1,006,605	4,206,103	13	232,404	8	4
1836	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1837	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1838	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1839	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1840	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1841	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1842	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1843	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1844	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1845	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1846	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1847	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4
1848	476,768	5,265,268	1,583,556	22,057	395	233	1,198	117	57,170	49,347	120,584	1,006,605	4,206,103	13	232,404	8	4

* For this year the Assessment Rolls were very imperfectly taken, owing to the disturbed state of the country.

Lancashire and Yorkshire Railway a Wreck.—No. 61.

At a meeting of the Lancashire and Yorkshire Railway Company, 6th September, 1848, Mr. William Rawson said,—

“He believed that there did not exist a more deplorable wreck of railway than that of the Lancashire and Yorkshire Company, notwithstanding the hopeful view which the Chairman seemed to take of its affairs. What was the public opinion about the matter might be gathered from the fact that West Riding Extension Shares, on which they had paid £6, were selling for £1—and that in a railway in the very centre of the kingdom.”

Ought Railways to be under the Management of one Person.—No. 62.

The Report of the Committee of Enquiry appointed by the Proprietors of the London, Brighton, and South Coast Railway, 14th February, 1848, contains the following remarks:—

“The Committee have taken into consideration the office filled by Mr. P. Clarke, and, fully admitting his abilities and knowledge of railway business, they are, nevertheless, of opinion that there should be an efficient head of each department, who should be immediately responsible to the Directors; and that it is undesirable that any one servant should interfere with the management of every other department, thereby destroying the responsibility of the officers so interfered with, and impairing the efficiency of the Board itself. The Lewes station is an illustration of this mischief arising from such interference. This station, as originally designed, would have been parallel to the main line, which is obviously the proper position; but Mr. Clarke was permitted to take the matter out of the hands of the engineer, and to build the station on its present inconvenient site, and that, too, at a cost far beyond the original estimate.”

And at the adjourned half-yearly meeting of the Brighton Company, 17th April, 1848, Mr. Alderman Wilson said,—

“He concurred in the propriety of the recommendation of the Committee that the New Cross station should be re-opened, as well as in the recommendation that efficient heads of departments should be appointed in preference to leaving everything to be managed by Mr. P. Clarke, who, he understood, had acted the various parts of manager, head engineer, head builder, and, in fact, as the head of the Directors themselves. He admitted that Mr. P. Clarke was a gentleman of superior talents and experience; but he was of opinion that too much responsibility had been imposed upon him.”

And at a further adjournment, 18th April, 1848, the Chairman, Mr. T. M. Parsons, stated:—

“The appointment of a General Manager was the consequence of an express instruction, not a resolution passed, but an understanding on the part of the proprietors at large. At that time such an appointment was considered essential to their well-being, though now a contrary opinion appeared to prevail. Then as to the recommendation of the Committee that there should be ‘heads of departments,’ he wished the proprietors to understand that the Company had ‘heads of departments.’ They had their locomotive engineer, their resident engineer, who superintended the permanent way, and other superior officers, as those belonging

to other Companies. As to the general power of the Manager to remove clerks and other officers of that class, he begged to say that Mr. Clarke could only report his objections to such persons, and that it was with the Board that dismissal rested. The inferior officers, namely, the porters and policemen, were necessarily under the control of those immediately above them, and their dismissal did not always come before the Directors. As to the stated interference of Mr. Clarke with various heads of departments, it was right he should observe that the general superintendence of a vigilant manager, such as that gentleman undoubtedly was, must be of great benefit. Mr. Clarke had, by his close attention generally to the whole management, and particularly to the engineering department, brought about considerable economical improvements. He was bound, in fairness, to bear this testimony. With respect to the Lewes station, the removal of which had been ascribed to the mischievous interference with heads of departments, he thought the Committee were labouring under some misapprehension. The matter was, he understood, originally taken into consideration by the Hastings, and not by the Brighton; and the station was changed from its original site for the purpose of conveying passengers from Brighton to Lewes, so as to get rid of the then existing necessity of resorting to the omnibuses, which had at the time a great traffic. It was considered important so to arrange the station as to enable the Company to take the people, as it were, to their own homes, and so to secure to the Company the whole of the omnibus traffic on the Lewes road.

“Mr. SCHUSTER, one of the Directors, observed that the Company had perfectly succeeded in doing this.

“The CHAIRMAN was informed by Mr. Clarke that the question alluded to was agitated long before he (Mr. Clarke) became connected with the Brighton.”

Traffic on the Grand Junction Canal increased by a Reduction of Tolls.—No. 63.

In the evidence of Sir F. B. Head, Bart., Chairman of the Grand Junction Canal, given before the Select Committee on Railways and Canals Amalgamation, on the 23rd April, 1846, the following occurs:—

“The CHAIRMAN.—Do you think that those Canals were enabled to make those great reductions in their charges in consequence of their coming to an amalgamation?

“Sir F. B. HEAD.—They have made those reductions; and the other lines of Canal with which we are connected have declined to join with us, and the consequence has been that on the distance from London to Leicester, which is 129 miles, the whole tonnage is 2s. 10½d. per ton, while the whole tonnage from London to Birmingham, which is 144 miles, amounts nearly to 7s., showing the difference between the prices on the amalgamated and the non-amalgamated lines of Canal.

“The CHAIRMAN.—Then you would wish the Committee to infer from that, that the amalgamation with the Leicester Canals has itself enabled you to make greater reductions than can be made on the Birmingham Canal, in consequence of there being no amalgamation in that district?

“Sir F. B. HEAD.—That reduction has of course been beneficial to the public, and, as will appear by this statement which I will hand in, it has been by no means injurious to the Canal Companies, because from the cheap amalgamated line, our tonnages in money have increased from £6,000 to £15,000 and £17,000

a-year; whereas from the non-amalgamated lines, which have kept up the high tonnages, our receipts have diminished from £80,000 to £41,000. On the amalgamated line the tonnage in weight has increased from 29,519 to 181,228 tons. On the non-amalgamated lines the tonnages have increased in weight from 224,267 to 299,608 tons.

[The Witness delivered in the Table, which was read, as follows:]

Trade via Buckby and Braunston compared, showing the results of Amalgamation and Non-Amalgamation:—

GRAND JUNCTION CANAL TRADE.

Revenue on Trade via the Grand Union Canal, collected at Buckby.				Revenue on Trade via the Oxford Canal, collected at Braunston.			
£		Tons.		£		Tons.	
1820.. 6,046		29,519		1820.. 79,976		224,267	
1821.. 6,685		...		1821.. 80,624		...	
1822.. 5,605		18,776		1822.. 78,511		203,887	
1823.. 7,754		27,224		1823.. 88,230		242,750	
1824.. 7,783		24,279		1824.. 88,874		235,481	
1825.. 9,667		...		1825.. 89,019		...	
1826.. 8,820	Grand Junction	30,188		1826.. 86,411	Grand Junction	234,596	
1827.. 7,297	Maximum	23,682		1827.. 87,519	Maximum	236,116	
1828.. 7,622	Thoroughfare	25,753		1828.. 85,014	Thoroughfare	233,700	
1829.. 7,180	Tonnage,	24,819		1829.. 80,475	Tonnage,	228,891	
1830.. 7,851	16s. 3½d.	28,716		1830.. 82,884	16s. 10½d.	244,999	
1831.. 7,236		21,467		1831.. 80,114		252,179	
1832.. 7,851		30,318		1832.. 80,188		267,166	
1833.. 8,676		38,813		1833.. 80,370		254,741	
1834.. 9,960		50,507		1834.. 78,983		233,752	
1835.. 15,174		86,908		1835.. 75,277		223,567	
1836.. 15,927		105,492		1836.. 77,040		236,264	
1837.. 12,751	Ditto	106,707		1837.. 63,045	Ditto	202,988	
1838.. 11,652	11s. 9½d.	78,802		1838.. 63,229	12s. 7½d.	277,852	
1839.. 11,762	Ditto	86,535		1839.. 53,032		282,894	
1840.. 10,308	8s. 1d.	75,855		1840.. 47,618		280,524	
1841.. 12,659		97,929		1841.. 49,218	Ditto	308,192	
1842.. 13,829	Ditto	94,399		1842.. 45,003	8s. 5d.	272,877	
1843.. 14,642	4s. 2½d.	96,121		1843.. 45,220		276,264	
1844.. 15,133		103,822		1844.. 49,353		324,128	
1845.. 17,902	Ditto from 1st July, 1845, 2s. 0½d.	181,228		1845.. 41,873	Ditto 4s. 2½d. from 20th Nov. 1844.	299,608	

London to Leicester, by Canal, is 139 miles; London to Birmingham by Canal, is 144 miles. Whole Tonnage from London to Leicester, 2s. 10½d.; whole Tonnage from London to Birmingham, about 7s.

Public Libraries.—No. 64.

The following information is extracted from an article by Mr. E. Edwards, read before the Statistical Society of London, 20th March, 1848 :—

“The principal Libraries of the several capital cities of Europe may be arranged in the following order :—

1 Paris (1), National Library	800,000 volumes.
2 Munich, Royal Library	600,000 ”
3 Berlin, Royal Library	470,000 ”
4 Petersburgh, Imperial Library	446,000 ”
5 Copenhagen, Royal Library.....	410,000 ”
6 London, British Museum Library	350,000 ”
7 Vienna, Imperial Library.....	313,000 ”
8 Dresden, Royal Library	300,000 ”
9 Madrid, National Library	200,000 ”
10 Wolfenbittel, Ducal Library	200,000 ”
11 Paris (2), Arsenal Library	180,000 ”
12 Stuttgard, Royal Library.....	174,000 ”
13 Milan, Brera Library.....	170,000 ”
14 Paris (3), St. Geneviève Library	150,000 ”
15 Darmstadt, Grand Ducal Library	150,000 ”
16 Florence, Magliabecchian	150,000 ”
17 Naples, Royal Library	150,000 ”
18 Brussels, Royal Library	133,500 ”
19 Rome (1), Casanate Library.....	120,000 ”
20 Hague, Royal Library	100,000 ”
21 Paris (4), Mazarine Library.....	100,000 ”
22 Rome (2), Vatican Library	100,000 ”
23 Parma, Ducal Library	100,000 ”

“Comparing the number of volumes in the Libraries of the chief European capitals with their respective populations, we find in Weimar, 803 volumes to every 100 inhabitants; in Munich, 750; in Darmstadt, 652; in Copenhagen, 465; in Stuttgard, 452; in Dresden, 432; in Hanover, 335; in Florence, 313; in Rome, 306; in Parma, 278; in Prague, 168; in Berlin, 162; in Madrid, 153; in Paris, 143; in Venice, 142; in Milan, 135; in Vienna, 119; in Edinburgh, 116; in Petersburgh, 108; in Brussels, 100; in Stockholm, 98; in Naples, 69; in Dublin, 49; in Lisbon, 39; in London, 20.

“We see, therefore, that Brussels is 5 times better provided in this respect than London; Paris, 7 times; Dresden, 21 times; Copenhagen, 23 times; Munich, 37 times; and the little city of Weimar, 40 times.

“The principal University Libraries of Europe may be ranked as follows :—

1 Goettingen, University Library	360,000 volumes.
2 Breslau, University Library	250,000 ”
3 Oxford, Bodleian Library.....	218,000 ”
4 Tubingen, University Library.....	200,000 ”
5 Munich, University Library.....	200,000 ”
6 Bologna, University Library	150,000 ”
7 Heidelberg, University Library	150,000 ”
8 Cambridge, Public Library	135,000 ”

9 Prague, University Library	130,000	volumes.
10 Dublin, Trinity College Library	117,600	"
11 Vienna, University Library	115,000	"
12 Leipsic, University Library	112,000	"
13 Copenhagen, University Library	110,000	"
14 Turin, University Library	110,000	"
15 Louvaine, University Library	105,000	"
16 Upsal, University Library	100,000	"
17 Erlangen, University Library	100,000	"
18 Edinburgh, University Library	96,000	"

From Tables compiled by Mr. Edwards we take the following, as exhibiting the numbers, in 1846, of the principal Public Libraries in the United Kingdom :—

TOWN AND LIBRARY.	Foundation of Library.	Population.	No. of Vols. Printed Books in 1846.	No. of Volumes MSS. in 1846.
BIRMINGHAM .....	..	190,000	..	....
1 Public Library	1779	..	21,000	....
2 New Public Library	1796	..	10,500	....
ABERDEEN .....	..	64,778	..	....
1 King's College Library .....	..	..	20,000?	....
2 Marischal College Library .....	..	..	12,000	....
BRISTOL .....	..	140,158	..	....
Bristol Library	1772	..	30,000	....
CAMBRIDGE .....	..	25,000	..	....
1 Public Library	1484	..	135,000?	2,000
2 Queen's College Library .....	..	..	35,000?	....
3 Trinity College Library .....	..	..	30,000?	....
4 Catherine Hall Library .....	..	..	20,000?	....
5 Christ College Library .....	..	..	10,000?	....
DUBLIN .....	..	238,531	..	....
1 Trinity College Library .....	..	..	117,600	1,100
2 Bishop Marsh's Library .....	..	..	?	....
3 Dublin Society's Library	1731	..	12,000?	....
EDINBURGH .....	..	138,182	..	....
1 Advocate's Library	1682	..	160,000?	....
2 University Library	1682	..	95,000?	....
3 Writers' to Signet Library .....	..	..	50,000	....
GLASGOW .....	..	300,000	..	....
1 University Library .....	..	..	50,000?	....
2 Hunterian Museum Library .....	..	..	12,000	....
LONDON .....	..	2 millions	..	....
1 British Museum Library	1753	..	350,000	29,531
2 Sion College Library	1631	..	27,000	besides
3 Dr. Williams's Library	1716	..	17,000	27,879
4 Archbishop Tenison's Library	1684	..	3,000	charters, rolls, &c.
MANCHESTER .....	..	360,000	..	....
Cheetham Library .....	..	..	19,000	....
OXFORD .....	..	24,000	..	....
1 Bodleian Library	1697	..	218,300?	17,000?
2 All Souls' College Library .....	..	..	50,000?	....
3 Christ Church College Library .....	..	..	30,000?	....
4 Radcliffe Library	1714	..	?	....
5 Ashmolean Library .....	..	..	30,000?	....
6 Queen's College Library .....	..	..	18,000?	....
7 Oriel College Library .....	..	..	15,000?	....
8 Wadham College Library .....	..	..	10,000?	....
ST. ANDREW'S .....	..	3,767	..	....
University Library .....	..	..	40,000	....

Box for conveying Money by Railway.—No. 65.

At a meeting of the Institution of Civil Engineers, held 7th March, 1848,—

Mr. Chubb, St. Paul's Churchyard, London, exhibited an iron box for the transmission of money, bullion, &c. on railways. A wrought-iron box, lined throughout with hard steel plates, is locked down at the terminus to a strong iron plate in the guard's carriage. The key of this lock, and also the key by which access can alone be obtained to the interior, is kept at the principal terminus by the officer who has charge of the cash. Each station-master is provided with a key, which opens a small lid at the top; when he has money to send, he unlocks the lid, places his bag of money or parcel in an open drum underneath, moves a handle which turns the drum, and the cash is dropped inside. Before he is able to take out his key, he must move the drum back and see that the money is gone. It will be observed that he cannot leave the lid unlocked. When the box arrives at the terminus it is unlocked from the frame, taken into the office and placed on a similar frame there. The cash keeper only can with his key then get access to the money.

Moving a House.—No. 66.

"Within the last fortnight, the Americans have been outdone in this kind of work, at Messrs. Ransomes' and May's, Orwell Foundry, Ipswich, where a brick-built house, two stories high, 26 feet by 18, has been moved a distance of 70 feet, and raised 2½ feet, without sustaining the slightest crack in the walls or ceilings, or even in the papering of the rooms. The removal was accomplished under the direction and superintendence of Mr. Worby, the manager of the works; and the *modus operandi* seems to have been this:—A series of holes, six inches square, was first made through the brick-work, close to the ground, at intervals of three feet, all round the house. Through these holes were inserted cantalevers, or pieces of timber, about four feet long, and the earth inside and out having been cleared away, the ends were made to rest on blocks of wood; so that, during the removal of the foundation, the superstructure would rest entirely on them. The next operation was to remove the foundation, and to lay in its place long pieces of timber, eleven inches square; these had a coat of mortar laid on, as a bed for the brickwork, and were then lifted up to the walls, forming a kind of framework, on which, the cantalevers and blocks being removed, the house stood as firmly as it did on its original foundation. The building was then raised to the required height, one side being elevated at a time, and a number of longitudinal timbers of great strength laid underneath, and continued along the ground as far as the new foundation. As a precautionary measure the sides of the house were bound in by means of stout planks run up at the angles, and fastened together with iron rods. The whole of this preliminary work occupied some time to complete, the workmen only turning to it when they had nothing else to engage them. The timbers, along which the house was to slide, having been well greased, three bottle-jack screws were brought to bear upon one end of the framework, and the process of locomotion commenced. The rate of travelling was about one foot in five minutes, but, as a long delay occurred each time the screws were re-fixed and got into play, not more than twenty-five feet could be accomplished in a day. The house is now standing on its second foundation, none the worse for the experiment to which it has been subjected."—*Suffolk Chronicle*, June, 1848.

Canals in America create Traffic.—No. 67.

The creative or productive power of Canals, Railways, &c., may be traced in the history and progress of the State of New York.

The Erie Canal was commenced in 1817, and completed in 1825, at a cost of 7,143,789 dollars, or £1,400,000 sterling. In 1817, the value of real and personal property in the city of New York, was, from official documents, estimated at £16,436,000 sterling. In 1825, it was estimated at £21,075,000 sterling. In 1829, the population of the State was 1,372,000, and in 1830 the population of the State was 1,918,000.

The Canal was found so inadequate to the traffic, that, between the years 1825 and 1835, a farther sum of £2,700,000 was expended in enlarging it; making the total cost to that date, £4,100,000 sterling.

It has been seen that in the City of New York—

In 1817, the official value of real and personal property was	£16,436,000
1835,	£45,567,000
Being an increase of 2½ times in 18 years.	

For the State of New York—

In 1817, the official value of real and personal property was	£63,368,000
1835,	£110,120,000

Or an increase of nearly £47,000,000 sterling in the value of property attributed chiefly, if not entirely, to the formation of the canals.

In 1836, the amount conveyed to tide-water by the canal was 697,357 tons.

And on the 1st of July of that year there had accumulated in the hands of the Commissioners an amount sufficient to extinguish the whole of the outstanding debt incurred in its construction.

The nett receipt from all the State canals, after deducting the expenses of collection and superintendence, for the year 1847, was £449,270. Villages, towns, and cities have sprung up along its course.

The population of the State, which was—

In 1810	959,949
Was in 1845	2,604,495

In 1846, the value of real and personal property was estimated at £128,500,000.

It will be seen from the above, therefore, that in addition to the wealth created for individuals, the canals produce a large annual revenue to the State.

Railway Commissioners.—No. 68.

In the House of Commons, on the 4th July, 1848, Mr. Banks thus described this department:—

“The original institution of a check or a guardianship of Railways by the Government was by an Act passed in 1839, and that guardianship continued from 1842 to August, 1844, and during that time it was conducted at an annual charge of £1,370. Afterwards, when Railway Interests had greatly increased, it had been found necessary to give further powers to the authority already constituted in the Board of Trade; and from 1844 there had been established an organized plan at a cost of £3,302 per annum. This charge so remained until the year 1846, when the new Board, to which he had to call attention, was created by a bill brought in at the very end of the session of that year. On a former occasion, the right hon. the Chancellor of the Exchequer stated that the bill had met with the full and entire approbation of the house. On referring to the records of Parliament, he

found that the only discussion on the bill took place on the 21st April, 1846, when certainly the greater part of those who spoke objected to the measure; but it was intimated that at the then late period of the session there would be no use in going to a division, and therefore, though a division had been called for, none took place, the numbers in the house at that moment being 66 members. The bill received the Royal assent on the last day of the session (the 28th of August, 1846), and it could not be said, seeing the mode in which it had been introduced and carried, that he (Mr. Banks), in seeking to repeal the Act, was going against the deliberate decision of Parliament. He had already shown that the cost of previous superintendence had been at the rate of £1,370 and £3,302 respectively, and yet the next estimate referring to the matter which had been laid before the house showed a charge of no less a sum than £17,000 for a period of one year and a quarter, and in the present estimates, namely, from the 1st of April, 1848, to the 31st March, 1849, the department was charged at £13,522 10s., including £2,000 for the President."

✓ **Statistics of making the Lancaster and Carlisle Railway.**—No. 69.

At the banquet given by Messrs. Stephenson, Brassey and Mackenzie, the contractors, in celebration of the opening of the Lancaster and Carlisle, in 1846, the following facts were stated in a speech from Mr. Mould, the contractors' superintendent. In the blasting of rocks no less than 4,800 barrels, or 200 tons of gunpowder, had been used. The patent fuses alone, if put on a line, would reach 400 miles. The length of drilling in the rock would extend to 200 miles. The number of nights during which the men worked was 152,147. The number of horses employed was 10,500. No less than 400,000 yards required blasting, as it could not be overcome by any other means. The number of bridges on the line was 219, of culverts 230, and of viaducts 500. The greatest number of men employed was about 10,000, and the number of workmen altogether was equal to 3,000,000 in one day; whilst the excavations averaged 100,000 cubic yards per mile. The number of waggons employed was 2,200, which, if extended in a line, would reach nearly five miles; and the temporary wheeling planks, placed end to end, would extend to 35 miles.

Engine in a Canal.—No. 70.

On the London and North Western Railway there is an Iron bridge to let Government boats pass through at Weedon, for the service of the barracks and military prison. This bridge was open on the 2nd of March, 1848, and the proper signal given, but owing to the inattention of the guard no notice was taken of the signal, and the engine fell into the middle of the boat, which instantly sank. No lives were lost.

A Railway Printing-Office.—No. 71.

The *Liverpool Standard* mentions that a capacious building at Newton, on the north side of the Liverpool and Manchester, known until recently as "The Leigh Arms Hotel," is being converted into a general printing-office. A printing-office in a village like Newton, however humble in pretension, a year ago would have been considered one of the greatest wonders of the age. The fact, however, is that the London and North Western have contracted with a practical person to undertake this extensive department; and the house in question has been selected as the best adapted for the purpose.—*Railway Chronicle*, January, 1847.

What quantity of Letters can be sent by Telegraph.—No. 72.

The greatest number of letters or signs which have yet been conveyed by telegraph in the United States is stated to have been 25,000 in 1 hour 30 minutes, being at the rate of 277 and a fraction per minute, while in England Mr. Bain has accomplished 1,400 per minute.—*Railway Chronicle*, 22nd April, 1848.

Ought Canals to be made into Railroads.—No. 73.

In the evidence taken before the Select Committee on Railways and Canals Amalgamation, on the 23rd April, 1846, Sir F. B. Head, Bart., Chairman of the Grand Junction Canal, made the following remarks :—

"The two tabular statements* I have submitted to the Committee clearly demonstrate the immense advantages the public have already derived from the competition which has naturally arisen between Canals and Railways; and it is evident that this competition and these advantages to the public must continue, and will probably increase, until the charges for the conveyance of merchandise, coal, &c. by Railway, shall have made it no longer remunerative for Canals to carry by water. But I submit, that whenever this moment shall have arrived, it will become the interest of the community to allow the whole network of inland navigation which now covers the country to be converted, at its own expense, into a general system of cheap rival Railroads. In many cases Canals would have little to do but to let off their water, and then, with the sanction of Parliament, to lay down their own rails upon their own territory; and even as regards the Grand Junction Canal, whose numerous flights of locks are unusually severe (in one part of it there being 57 locks in 48 miles), it has been officially reported to me, 'That Mr. Cubit has declared as his decided opinion that the conversion of the Grand Junction Canal into a Railway was not only practicable, but that the gradients were peculiarly eligible, and superior to the generality of Railways.' It is impossible to estimate the advantages the public would derive from the wholesome competition which would exist between two rival systems of cheap and expensive Railways. One result, however, is certain; namely, that every latent power of the Railway would be developed, and be exerted to its utmost, to the triumph of science, and for the benefit of the public. But, from the mere showing of the case, it is evident that it is the interest of existing Railroad Committees, several of whom are guided by long-headed and far-sighted men, not only to put an end to the existing competition between Railways and Canals, but effectually to prevent the future competition I have described; and most certainly they will succeed in attaining both objects, if they can get from Parliament power to possess themselves, directly or indirectly, even of the tolls of short portions of the existing lines of water navigation. For these reasons, I respectfully submit to the Committee, that although a few Canal Companies, caring for no interests but their own, will no doubt willingly agree to sell themselves at high prices to the Railroads, it is for the general interest of Canal navigation, and, above all, for the paramount interest of the public, that the iron-ways should not, by amalgamation or otherwise, be allowed unfairly to break up the water-ways of the country, and thus, by rendering it impracticable to convert our Canals into rival arterial lines of Railroad, to establish a powerful monopoly, which the public may be unable to control."

* These statements may be seen at pages 39 and 41 of this work.

Manchester and Buxton Railway.—No. 74.

The "Railway Chronicle" of July 8th, 1848, thus describes the above:—

"The Manchester, Buxton, Matlock and Midlands *deviation* of this session is a curiosity in its way—one of those whims of eccentric genius that sometimes startle and puzzle us. It is the one line—the Benjamin of Mr. George Stephenson,—and now makes its third appearance in a new shape, which makes one wonder why it should retain its present title. In 1846 an Act was obtained for a line under this name, which, commencing at Stockport, passed through Whaleybridge, Burton and Ashford to Matlock, thus intersecting in its main route the most delightful scenery and most famous watering-places of Derbyshire, and laying them open to Lancashire and Cheshire at one extremity, and to all the districts radiating from Derby at the other. In 1847 another deviation was applied for and obtained, by which better gradients were secured, at the expense of a slight circuit more to the South. This year another deviation has been applied for, and successfully in the Commons, in an exactly opposite direction—towards the North. Buxton, the principal town in the route, is put on a branch of a mile, with a gradient of 1 in 20, proposed to be worked by stationary power; while the main line, after piercing a tunnel two miles in length, proceeds through the Duke of Devonshire's grounds, within sight and hearing of his mansion of Chatsworth, as if towards Sheffield, but suddenly halts, and drops down towards Matlock. It cannot be denied that a line which runs through the lawn before a nobleman's house, dashes through an unnecessary tunnel of two miles, at an unnecessary expense of £250,000, and places the principal town from which it derives its name upon a branch with a gradient of 1 in 20, is a railway curiosity."

Shipwrecked Persons sent free by Railway.—No. 75.

The "Railway Chronicle," 2nd January, 1847, says:—

"All the chief railway and steam-packet companies have followed the good example of the Eastern Counties, which we have already recorded, and have agreed to convey to their homes any shipwrecked fishermen or mariners having the Shipwrecked Mariners' Society's pass;—namely, the North-Western, Grand Junction, Great-Western, South-Western, South-Eastern, Bristol and Birmingham, Midland, York and North-Midland, Hull and Selby, Norfolk, and South Devon.—Shipping Companies: Bristol Steam Navigation Co., Hayle and Bristol; Dundee, Perth and London Shipping Co., City of Glasgow, Glasgow and Liverpool, Royal Cork General Shipping Co., and Gravesend Co."

Canals a Loss to Railways.—No. 76.

During the mania of 1845, cases of Canal amalgamation with Railways were before Parliament; and, although some might have been desirable, there is no doubt but others were calculated to entail a loss on the Companies, and the following remarks made by Mr. Holland, at a meeting of the Manchester, Sheffield, and Lincolnshire Railway, 9th August, 1848, will shew an instance:—

"Mr. Holland stated that the half year's loss on the Peak Forest Canal was £788; on the Ashton Canal, £1,131; on the Macclesfield Canal, £1,714; making a total of £3,633 for the half year."

Cost of Working Trains.—No. 77.

The following particulars, from official documents, will show the expense of working a railway train on various railways in 1845, giving the average cost for each train per mile:—

ARBROATH AND FORFAR RAILWAY.

Locomotive power, viz.—Coke.....	d. 4.785
Repairs of Engines and Tenders	1.350
Wages to Engine-drivers and Stokers	1.257
Oil, grease, &c.	0.417
	d. 7.789
Passenger-carriage expenditure, &c.....	0.549
Goods-waggon expenditure, &c.	1.472
Wages and Clothing to Guards	0.422
Total expense per train per mile.....	10.232

BIRMINGHAM AND GLOUCESTER RAILWAY.

	AVERAGE EXPENSE PER MILE.				TOTAL AVERAGE EXPENSE PER MILE.	
	Birmingham and Gloucester.		Bristol and Gloucester.			
	Passenger Trains.	Goods Trains.	Passenger Trains.	Goods Trains.	Passenger Trains.	Goods Trains.
	d.	d.	d.	d.	d.	d.
Cost of Coke	3.96	5.11	3.56	6.60	3.76	5.85
General Charges ..	2.65	3.26	3.01	3.96	2.83	3.61
Repairs of Engines.	3.94	5.16	4.83	4.83	4.38	4.99
Repairs of Carriages	2.20	2.20	1. 0	1. 0	1.60	1.60
Total	12.75	15.73	12.40	16.39	12.57	16.05

BODMIN AND WADEBRIDGE RAILWAY.

The average expense of working each train is about 1s. 6d. per mile.

CHESTER AND BIRKENHEAD RAILWAY.

The average expense of working each train, excluding all station and other general charges, is 1s. 5d. per mile, and the only charge made for depreciation of the stock is the actual cost of repairs.

The cost of coke per mile is 4d., and is included in the above amount.

The cost of repairing engines and carriages is 10½d. per mile, and is also included above.

DUNDEE AND ARBROATH RAILWAY.

	s.	d.
Cost of Coke per train per mile	0	3 3-10
Cost of wear and tear ditto	0	2 4-10
Cost of other working expenses, including management and all other charges	1	1 1-10
Average total cost per train per mile	1	6 8-10

DUBLIN AND DROGHEDA RAILWAY.

Average cost per mile of working a train.....	7½d.
Average price of coke per mile for working a train	3½d.
Wear and tear of engines per mile.....	1½d.
Wear and tear of carriages	¾d.

EASTERN COUNTIES RAILWAY.

Average cost per mile of working a train, consisting of 11 carriages, vans, and including locomotive power s. d.
1 5

Average cost of coke 0 5½
Average cost of working engine, &c. 0 2½
Average cost of repairs of engine and tender, &c. 0 5
Average cost of wear and tear of carriages, &c. 0 4

Total per train per mile 1 5

GRAVESEND AND ROCHESTER RAILWAY.

The average expense per mile of working each train is about 10½d.

GLASGOW, PAISLEY, KILMARNOCK, AND AYR RAILWAY.

Average cost of coke per train per mile s. d.
0 3
Wear and tear of engines, carriages, and wages of engine-drivers, mechanics, firemen, guards, and the maintenance of way, &c. .. 0 8½

Total cost per train per mile 0 11½

HAYLE RAILWAY.

Locomotive (per contract) per mile s. d.
1 9
Loading and unloading 9 70-100
Sacking 0 6 08-100
Inclined planes 0 11 15-100
Guards, breaksmen, switchmen, police, porters, &c. 0 11 27-100

5 11 20-100

HULL AND SELBY RAILWAY.

	Coke.		Materials.		Wages to Engine and Firemen.		Labourage & Superintendence.		Total expense of Locomotive power per mil	
	Pas-sen-gers.	Goods.	Pas-sen-gers.	Goods.	Pas-sen-gers.	Goods.	Pas-sen-gers.	Goods.	Pas-sen-gers.	Goods.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
1st Year..	3.89	5.50	2.55	2.70	1.92	2.87	5.84	13.03	14.20	24.10
2nd ditto..	3.03	4.26	2.45	2.18	1.90	2.66	3.58	11.95	11.96	21.05
3rd ditto..	2.70	3.32	2.30	3.01	1.81	2.40	3.35	4.97	10.16	13.70
4th ditto..	2.49	3.05	1.17	2.16	1.76	2.30	2.58	4.69	8.00	12.20
5th ditto..	2.36	3.05	1.16	2.13	1.36	2.10	2.87	3.82	7.75	11.10

LONDON AND BLACKWALL RAILWAY.

The average expense of working each train per mile is d.
23.506
The average expense per train per mile for coals is 6.852
The average expense per train per mile for wear and tear of carriages and engine is 3.720

LONDON AND BRIGHTON RAILWAY.

	d.		d.
Maintenance of way and works.....	5.18	Stationery, advertising, &c.	1.45
Working engines	3.74	Miscellaneous charges .....	.51
Repairing engines	2.92	Law charges .....	.12
Coke	5.31	Compensation .....	.06
Coach & waggon repairs & alterations	3.26	Bond, &c. stamps .....	.01
Coaching (traffic charges)	5.74	Rates and taxes	2.16
Goods (ditto)	2.39	Government duty	4.38
Office charges	1.34	Debt interest	11.98
Direction .....	.5	Tolls	15.7
		Total	67.81

LONDON AND SOUTH-WESTERN RAILWAY.

WEAR AND TEAR OF CARRIAGES.

1st July to 31st December, 1845 :—

Passenger trains, average	3.13d. per train per mile.
Goods Trains, average	5.30d. per train per mile.

WEAR AND TEAR OF ENGINES.

The cost during the half-year ending 31st December, 1845, of locomotive power, was for

Passenger trains, coke	3.65d.—other expenses	6.60d.
Goods trains, coke	6.60d.—other expenses	6.31d.

MANCHESTER AND BIRMINGHAM RAILWAY.

Cost of coke	3.72
Wear and tear of engine	3.66
Ditto of carriages .....	.22

Total 7.60

MANCHESTER, BOLTON, AND BURY CANAL NAVIGATION & RAILWAY.

Average expense per mile of working the trains	14.44d.
Cost of coke	2.72d.

MANCHESTER AND LEEDS RAILWAY.

	RATE.	REMARKS.
	d.	
For coke, 33.96lbs. per mile run	2.3	
Repairs of engines, tenders, } carriages, and waggons }	4.33	Or, including allowance for depreciation of locomotive carriage and waggon stock, 2.09 per mile = 6.42d. per mile.
Wages, and for all other ex- penses connected with pas- senger or goods traffic, includ- ing maintenance of way, &c. }	13.45	Total cost per mile for working each train, 2s. 2½d.
Total	20.08	Or including allowance for depreciation, as above, 1s. 10.17d.

MARYPORT AND CARLISLE RAILWAY.

	Coke.	Tallow, Oil, and Waste.	Pumping Water, Cleaning Engines, Filling Coke.	Enginemen's and Firemen's Wages.	Repair of Engines and Tenders.	Repairs of Car- riages, & Wages of Guards and Porters.	Total Cost per Train per Mile.
	d.	d.	d.	d.	d.	d.	s. d.
Passenger trains	0.7	0.59	1.06	1.08	14.57	2.25	1 8½
Goods trains	1.7	0.8	1.1	1.4	15.	9.75	2 5½

NEWCASTLE-UPON-TYNE AND CARLISLE RAILWAY.

The average expense of working a train per mile is—Coke, 4d.; wear and tear, 4d.; general expenses, 5d.—Total, 1s. 1d.

NEWCASTLE-UPON-TYNE AND NORTH SHIELDS RAILWAY.

The average expense per train per mile is 9½d.—Of which the coke costs 1½d.; wear and tear of carriages, 1½d.; locomotive power, 6½d.

PONTOP AND SOUTH SHIELDS RAILWAY.

The average expense of working each train, consisting of 50 coal waggons, by the locomotive engine, is—Working, 0.86d.; repairs, 1.30d.; coke, 1.15d.; wear and tear of waggons, 1.92d.—Total, 5.13d.

SOUTH EASTERN RAILWAY.

The average expense of working each train (half-year ending 31st January) was about 3s. 1½d. per mile.

ULSTER RAILWAY.

Average expense of working each train per mile:—Locomotive power in 1845, 8.8d. per mile; coke, in 1845, 4.64d. per mile.

WILSONTOWN, MORNINGSIDE, AND COLTNESS RAILWAY.

Average expense per mile of working each train, 8½d.—Fuel, 4d. per mile; wear and tear, 2½d. per mile; men's wages, 2d. per mile.

YORK AND NORTH MIDLAND RAILWAY.

The average expense per mile of working each passenger train is as follows:—Coke, 2½d. per mile; wear and tear of carriages, 3d.; wages, &c., 7d.

Merchandise trains:—Coke, 3½d.; wear and tear of carriages, wages, &c.

Cost of Construction of Belgian Railways.—No. 78.

The following are the Details of the Cost of Construction.

The divisions that cost the least are—

	<i>kil.</i>	<i>francs.</i>		<i>£</i>
From Ghent to Courtray.....	43	7 cost 102,805	per kil. =	6,620 per mile.
„ Ghent to Bruges	44	6 „ 119,176	„ „	7,675 „
„ Landen to St. Trond....	10	2 „ 139,591	„ „	8,990 „

The divisions that cost the most are—

From Louvain to Tirlemont ..	18	1 „ 309,941	„ „	19,957 „
„ Liege to Prussian Frontier	39	6 „ 633,562	„ „	40,797 „
„ Ans to Liege	5	9 „ 969,758	„ „	62,323 „

The average cost of the whole series of 559 kilometres, or 347 miles, was 265,883 francs per kilometre, or £17,132 per mile, which is thus divided:—

	<i>francs.</i>		<i>£</i>
Land and compensation.....	45,332	per kil. =	2,919 per mile.
Earthwork, bridges, tunnels, &c.	111,227	„ „	7,163 „
Permanent way	48,857	„ „	3,146 „
Stations and buildings	17,905	„ „	1,153 „
Working stock	34,159	„ „	2,201 „
Miscellaneous expenses	8,403	„ „	550 „
	<u>265,883</u>		<u>17,132</u>

The actual has exceeded the estimated cost by 128 per cent. The land required (estimated to cost 17 millions of francs) cost actually 54 millions. The buildings, estimated at three millions, cost nine millions. The earthwork cost also three times its estimated cost. The permanent way, estimated with 35 lb. rails to cost 24 millions, cost actually 34 millions, with rails of 50 lbs. per yard.

Railway Passengers in Belgium.—No. 79.

The separation into different classes is as follows, with the per centage on each year's passenger traffic :—

	Total Passengers.	First Class.	Second Class.	Third Class.
1839	1,900,940	233,266 or 12½ per ct.	618,296 or 32½ per ct.	1,049,378 or 55½ per ct.
1840	2,194,413	243,143 „ 11 „	656,336 „ 30 „	1,294,934 „ 59 „
1841	2,635,874	210,085 „ 8 „	719,065 „ 27½ „	1,706,724 „ 64½ „
1842	2,716,775	255,225 „ 9½ „	681,972 „ 25 „	1,779,578 „ 65½ „
1843	3,071,093	310,306 „ 10 „	854,398 „ 28 „	1,906,389 „ 62 „
1844	3,360,862	362,234 „ 10½ „	928,606 „ 27½ „	2,070,022 „ 61 7-12
1845	3,443,066	397,608 „ 11½ „	970,662 „ 28 „	2,074,796 „ 60½ „

The mean term of division of the three classes may be taken generally as, of 100 passengers, 10 are first class, 27 second class, and 63 third class; and of the amount of total receipts for passengers, 26 per cent. is for first class fares, 36 per cent. is for second class fares, and 38 per cent. is for third class fares.

The average distance travelled by each passenger being—

	Kilom.	Miles.
First Class	56.5	= 35½
Second Class	41.2	= 25½
Third Class	29	= 18

The general average of the journeys of 1,000 passengers on all the lines is as follows :—

500 travel a less distance than 30 kilometres, or 19 miles.
 300 . . . ditto . . . 50 kilometres, or 31 miles.
 144 . . . ditto . . . 100 kilometres, or 62 miles.
 51 . . . ditto . . . 150 kilometres, or 93 miles.
 5 . . . ditto . . . beyond the last distance; and that actually
 six miles of distance was the extent of the journey of by far the greater number of passengers.

Railway Accommodation in different Countries.—No. 80.

As to the extent of railway accommodation in various countries, and applying a proportionate standard to each, it appears that England, in the year 1843, had by no means a disproportionate extent of railways measured by its population. Taking the population of Great Britain as having been then 27 millions, of Belgium at 4,250,000, of France at 34½ millions, and of the United States at 17,069,453, it is found that in 1843 there were—

In Great Britain	2,236 miles of railway opened, or 83 miles per million inhabitants.
Belgium	347 . . . ditto . . . 83 ditto.
France	1,087 . . . ditto . . . 31 ditto.
United States	6,326 . . . ditto . . . 530 ditto.

Thus Great Britain and Belgium are relatively in the same position with regard to extent of railways. As to the number of passengers transported in the year 1842 in England, on 1,430 miles of the principal railways, there were 13,705,000 passengers carried, or 9,600 per mile; while in Belgium in 1845, on 347 miles of railway, there were 3,470,678 passengers carried, or 10,002 per mile.

Mines in Belgium—No. 81.

Statement of the Number of Coal Mines in Belgium; distinguishing the Districts, and Superficial Area thereof, the Number of Persons Employed, the Number and Power of Steam Engines in use, and the Quantity of Coal Produced, in the year 1838.

DISTRICTS AND DIVISIONS.	Number of Mines.			Superficial Area.		Number of Pits.		Steam Engines, for				Quantity of Coals Produced.
	Worked.	Not Worked.	Total.	Granted.	Provi- sionally Assigned.	In Work.	Con- structing.	Raising Coal.		Draining.		
								Number.	Horse Power.	Number.	Horse Power.	
DISTRICTS.				Hectares.	Hectares.							Tonneaux
Mons and Tournay ..	53	16	69	22,262	30,345	109	69	97	2,664	28	4,091	1,691,549
Charleroy	82	3	85	14,129	16,557	209	54	48	1,217	20	1,188	724,259
Namur	36	2	38	10,449	67	57	33	8	170	..	..	103,954
Luxembourg .....	..	..	..	..	..	..	..	..	..	..	..	..
Liège (left bank of the Meuse)	52	8	60	7,850	6,157	57	7	34	858	23	2,229	408,584
Liège (right bank of the Meuse)	43	12	55	10,430	4,147	48	9	24	460	9	933	331,824
DIVISIONS.												
Province of Hainault	135	19	154	36,391	46,902	318	123	145	3,881	58	5,979	2,415,909
" Namur and	36	2	38	10,449	67	57	33	8	170	..	..	103,954
" Luxembourg }	95	20	115	18,280	10,305	105	16	53	1,318	32	3,162	740,408
" Liège												
Total	366	41	307	65,190 Acres. 162,800	57,274 Acres. 143,185	480	173	211	5,369	90	8,441	3,260,371 Tons. 3,201,584

Statement of the Number of Metallic Mines in Belgium; distinguishing the Districts thereof, the Number of the Places of Extraction, the Number of Persons Employed, the Number and Power of Steam-Engines in use, and the Quantity of Ore extracted, in the year 1886.

DISTRICTS AND DIVISIONS.	Mines granted under a recent Law. Number.	Superficial Area. Hectares.	Number of Com- munes in which Mines are worked under an old Law.	Number of Places of Extraction in Work.		Number of Persons Employed.	Steam-Engines for Draining.		Ore extracted.	
				Open.	Suber- taneous.		Number.	Horse Power.	Quantities.	Description.
DISTRICTS.									Tonneaux.	
Mons and Tournay .....	..	..	3	1	2	160	..	1	28,000	Iron.
Charleroy	2	2,559	5	..	12	46	..	12	8,326	Iron.
									213	Lead.
Namur	21	22,817	41	24	447	1,889	6	62	208,046	Iron.
									135	Lead.
Luxembourg	2	12,868	16	56	42	298	..	..	23,619	Iron.
									21	Lead.
Liege (left bank of the Meuse)	11	2,507	..	..	26	186	1	8	4,844	Calamine.
									8,708	Iron.
									4,028	Alum. Schiste
Liege (right bank of the Meuse)	4	9,652	19	2	128	896	1	12	12,877	Calamine.
									62,642	Iron.
DIVISIONS.										
Province of Hainault	2	2,559	8	1	14	206	1	12	31,826	Iron.
„ Namur and Luxembourg	23	35,685	57	80	489	1,687	6	62	348	Lead.
									231,665	Iron.
									26	Lead.
„ Liege	15	12,159	19	2	154	1,082	2	20	17,721	Calamine.
									71,347	Iron.
									4,028	Aluminous Schiste.
									334,838	Iron.
									328,810	Iron.
									374	Lead.
									367	Lead.
									17,721	Calamine.
									17,402	Calamine.
									4,028	Aluminous
									3,956	Schiste.
Total of the Kingdom	40	50,403 Acres. 126,007	84	83	657	2,975	9	94		

Quantity of Wine Produced in Madeira.—No. 82.

The following is a statement of the quantities of Wine, and of the different kinds of Grain produced in the Island of Maderia, in each year ending 30th June, from 1843 to 1847 :—

WINE AND GRAIN.	1843.	1844.	1845.	1846.	1847.
Wine..... Pipes.	16,131	15,208	15,144	13,681	14,259
Grain :—					
Wheat Qrs.	6,863	8,468	7,014	7,991	6,476
Barley "	2,777	3,684	3,128	3,181	2,932
Maize "	75	38	36	30	28
Rye "	867	831	876	134	537
Beans and Peas "	178	181	90	161	88

Statement of the Quantities of Wine Exported from the Island of Madeira to various countries, in each of the years ending 30th June, 1843 to 1847.

COUNTRIES.	1843.	1844.	1845.	1846.*	1847.*
	Pipes.	Pipes.	Pipes.	Pipes.	Pipes.
Brazil	34	25	32	21	5
Denmark	66	185	102	54	38
France	15	4	..	43	..
Great Britain	1,943	1,740	1,638	1,769	1,498
British Possessions :—					
West Indies.....	1,062	929	904	865	840
East Indies.....	496	490	378	489	252
Gibraltar	18	36	4	9	2
Newfoundland .....	..	1	..	..	..
Coast of Africa	15	1	4	22	2
Australia	8	..	3	6	1
Hamburgh	784	1,175	546	706	256
Holland	299	14	40	10	30
Italy	46	..	34	5	2
Monte Video	3	2	..	2	8
Portugal, Azores, &c.	253	414	556	234	216
Russia	2,418	977	1,380	1,765	1,954
Spain, Canaries, &c.	6	..	2	3	6
Sweden.....	..	72	..	27	..
United States	108	48	1,302	1,714	1,528
Ships' Use	74	80	62	96	68
Total	7,648	6,186	6,987	7,840	6,706

* The value of the Wine Exported in 1846 is estimated at £196,000, and in 1847 at £167,650.

Wine Produce of Cadiz.—No. 83.

The following is a statement of the Produce of the Wine Districts in the neighbourhood of Cadiz, the Wine in Store, and the Value thereof; with the Number of Persons Employed, and the Rate and Amount of Wages, in the year 1841 :—

WINE DISTRICTS.	Vintage of the year 1841.			Wines of former vintage in store.		
	Quantities.	Value.		Quantities.	Value.	
		Rate per Pipe.	Total.		Rate per Pipe.	Total.
	Pipes.	£	£	Pipes.	£ s.	£
Zérès de la Frontera ..	35 to 40,000	4	157,500	18,000	13 10	243,000
Puerto de Santa Maria	10,500	5	52,500	75,000	15 0	1,125,000
Rota	500	2	1,000	2,000	5 10	11,000
San Lucar de Barrameda	14,000	3	42,000	60,000	8 0	480,000
	In the Vineyards.			In the Cellars.		
	Number of Persons Employed.	Wages.		Number of Persons Employed.	Wages.	
		Rate per Day.	Total.		Rate per Day.	Total.
		s. d.	£		s. d.	£
Zérès de la Frontera ..	5,000	1 8	120,000	360	2 6	4,608
Puerto de Santa Maria	640	1 8	18,200	80	2 6	2,160
Rota	1,250	1 8	36,000	75	2 1	2,700
San Lucar de Barrameda						

Fees on London and York Bill in 1845.—No. 84.

Return of the Amount of Fees charged and paid in the House of Commons in the last Session of Parliament, by the Promoters of the London and York Railway:—

On Petition :—	£ s. d.
House Fees	3 17 4
Committee fees	1,321 19 8
Serjeant, housekeeper, and messenger's fees	1 10 0
	£ s. d.
	1,327 7 0
On Bill :—	
House fees	200 15 4
Committee fees	396 11 0
Serjeant, housekeeper, and messenger's fees	231 10 0
Ingrossing fees	174 11 9
Private Bill Office fees	81 6 8
Doorkeeper's fees	3 3 0
For copies of petitions and papers	32 0 0
	1,119 17 9
For a copy of the Minutes of Evidence taken in Group X, to which the London and York Railway Bill was referred (at per folio)	944 4 0
	£3,391 8 9

Duty paid by Railways.—No. 85.

The following is an account of Railway Duty collected in England and Wales from 5th January, 1841, to 5th January, 1846; being six years.

RAILWAYS.	Year ending 5th Jan. 1841.		Year ending 5th Jan. 1842.		Year ending 5th Jan. 1843.		Year ending 5th Jan. 1844.		Year ending 5th Jan. 1845.		Remarks.
	£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.	
1. Birmingham and Derby	2,720	6 8½	2,337	7 0	2,136	12 4½	2,296	18 4	1,101	6 2½	Now included in 39 ditto in 3.
2. Birmingham and Gloucester ..	720	16 10	3,645	5 4	3,262	4 5½	3,071	19 3	637	19 4	
3. Birmingham and Bristol	16	5 10½	15	2 7½	12	8 11½	5	16 1½	2,927	12 1	ditto in 15.
4. Bodmin and Wadebridge	345	9 6½	304	2 1	259	3 7½	272	0 11½	5	14 5½	
5. Bolton and Leigh	261	7 1	374	16 5	368	16 11	301	7 2	ditto in 43.
6. Bolton and Preston	2,620	15 10½	2,675	11 9	1,737	17 7	1,014	7 3	300	5 10	
7. Brandling Junction	783	19 0	ditto in 42.
8. Bristol and Gloucester .....	....	....	....	....	....	....	....	....	887	8 1
9. Canterbury and Whitstable ..	29	4 0½	74	14 11½	67	13 8½	40	14 7	356	16 7	ditto in 3.
10. Chester and Birkenhead	135	19 9	2,169	10 7	1,566	17 11	1,073	11 1	45	0 5½	
11. Clarence	180	4 5	211	4 9	133	4 2	77	2 10	1,356	12 9	ditto in 58.
12. Durham and Sunderland	501	15 0	577	15 1	453	11 7	290	8 11	55	16 10	
13. Durham Junction	105	14 2	137	15 8	134	15 9	116	11 5	292	17 3	ditto in 42.
14. Eastern Counties	1,317	18 7	1,759	2 6	1,875	2 9	3,807	6 0	43	12 9	
15. Grand Junction	15,030	8 7	14,456	11 11	13,545	3 3	11,511	10 5	8,960	1 9	ditto in 42.
16. Gravesend and Rochester	10,966	15 2	21,814	8 7	25,804	5 2	25,089	17 4	11,341	9 6	
17. Great Western	1,475	14 10	2,239	2 2	2,493	11 7	28,494	19 3	ditto in 58.
18. Great North of England	15	3 8	8	10 8	8	4 2	9	9 8	2,416	2 3	
19. Hartlepool and Brampton	259	5 11	302	16 7	248	4 2	160	0 7	10	17 4	Competition.
20. Hayle (Cornwall) .....	....	....	....	....	....	....	33	19 0	145	10 3
21. Hereford and Monmouth Gap ..	2	0 0	2	0 0	2	0 0	2	0 0	64	19 5½	Now included in 63 ditto in 63.
22. Hull and Selby	1,024	4 1	2,097	3 4	2,033	17 7	1,515	18 6	87	18 2½	
23. Leeds and Selby	1,358	9 1	485	18 7	388	4 9	231	13 7	227	19 10	Competition.
24. Lancaster and Preston	508	2 2	1,198	15 0	1,293	13 5	1,651	1 9	1,752	10 6	
25. Leicester and Swannington ..	100	10 11	99	3 10	76	9 7	44	5 5	237	19 10	ditto in 63.
26. Leicester and Swannington ..	....	....	....	....	....	....	....	....	1,376	19 8½
27. Leicester and Swannington	1,167	4 0	ditto in 63.
28. Leicester and Swannington ..	....	....	....	....	....	....	....	....	44	12 3
29. Leicester and Swannington ..	....	....	....	....	....	....	....	....	44	2 4

27. Liverpool and Manchester	8,105 17 4	7,909 11 0	6,798 16 10	5,661 17 3	6,063 8 3	4,510 12 4	Now included in 15
28. Llanely and Liandlo	3 10 0	12 10 3	10 11 0	9 0 14	8 11 5	12 15 6	
29. London and Greenwich	2,696 5 2	2,679 7 5	2,504 12 1	2,050 5 6	2,174 4 2	174 8 4	ditto in 53.
30. London and Birmingham	24,806 7 2	26,227 6 8	25,940 14 1	25,412 3 1	26,727 15 5	28,772 13 10	
31. London and Croydon	1,636 12 6	1,743 9 9	1,582 11 3	797 3 11	1,124 13 7	1,596 16 9	
32. London and Brighton	299 11 4	1,485 6 10	5,827 1 11	7,819 3 3	8,955 13 4	9,732 1 3	
33. London and Blackwall	1,031 10 8	2,367 3 0	2,529 14 4	2,028 15 6	2,059 5 0	2,674 12 9	
34. Manchester, Bolton, and Bury	1,288 4 8	1,391 1 10	1,060 19 10	1,149 8 4	1,516 10 1	1,440 1 8	
35. Manchester and Leeds	3,032 15 4	8,023 3 9	7,804 18 7	6,047 0 4	6,996 16 8	7,381 9 11	
36. Manchester and Birmingham	839 12 10	1,486 7 2	1,976 3 9	3,657 4 10	4,175 9 8	4,497 11 10	
37. Maryport and Carlisle	4 2 84	34 15 4	36 16 5	96 3 4	163 19 0	306 15 11	
38. Midland Counties	2,862 17 2	5,289 9 8	4,834 1 10	4,411 3 7	2,416 15 9	11,685 9 3	ditto in 39.
39. Midland	2,410 2 2	2,188 1 3	1,673 8 8	1,281 1 5	5,960 9 1	1,632 4 5	
40. Newcastle and Carlisle	2,136 7 2	1,937 8 2	1,520 3 3	776 10 11	1,757 4 0	1,116 16 8	
41. Newcastle and North Shields					1,814 2 6	4,303 10 10	
42. Newcastle and Darlington					2,685 5 1	1,648 3 10	
43. North Union	1,900 15 8	1,894 14 4	1,502 9 9	1,039 14 10	1,830 8 11	....	ditto in 39.
44. North Midland	3,697 5 8	7,869 7 8	6,182 11 4	4,883 14 5	2,685 5 1	....	ditto in 14.
45. Northern and Eastern	305 10 10	2,283 12 6	3,064 19 8	3,274 17 2	1,238 11 7	....
46. Norfolk	....	....	....	....	495 6 5	1,318 14 9	ditto in 42.
47. Pontop and South Shields	16 17 4	51 13 4	41 3 8	4 18 4	28 1 11	28 4 3	
48. Preston and Longridge	418 11 5	934 4 10	489 5 8	20 4 10	601 2 6	680 16 8	
49. Preston and Wyre	....	29 11 2	50 6 9	22 14 0	10 11 9	....	ditto in 41.
50. Seghill and Percy Main	985 1 8	796 2 11	596 11 8	361 10 10	386 12 4	292 3 0	ditto in 39.
51. Sheffield and Rotherham	....	45 13 4	751 10 6	937 10 5	1,302 14 0	1,910 5 3	
52. Sheffield, Ashton, & Manchester	....	....	1,274 3 7	5,710 6 4	8,971 8 9	11,599 4 11	
53. South Eastern	10,131 3 5	10,622 19 4	12,043 19 7	12,032 15 9	12,789 7 0	12,135 0 0	
54. South Western	36 4 11	29 6 4	47 6 0	81 9 10	99 18 10	102 3 3	
55. St. Helen's and Runcorn Gap	32 17 7	29 8 3	29 14 3	12 3 8	7 19 7	....	ditto in 42.
56. Stratford and Moreton	177 4 2	196 1 8	127 5 1	....	....	....
57. Stanhope and Harlepool	....	277 10 1	260 11 4	231 13 11	247 8 5	346 3 3	
58. Stockton and Darlington	1,007 9 11	1,100 17 11	795 2 6	582 3 10	557 18 0	682 11 5	
59. Stockton and Darlington	....	410 4 0	473 7 2	272 19 4	317 6 5	429 9 0	
60. Taffe Vale	67 2 4	....	....	....	....	4 8 5	
61. West London	....	....	....	....	....	....
62. Whitby and Pickering	113 16 9	102 19 6	80 16 3	60 19 9	68 8 1	49 12 0	ditto in 63.
63. York and North Midland	1,367 4 10	2,722 3 8	3,360 1 2	3,336 11 11	3,509 14 3	5,293 19 8	

Travellers and Conveyance from Alexandria.—No. 86.

The following is a statement of the means of Inland Water Conveyance belonging to the two establishments for the transit of Travellers from Alexandria *en route* to India; and of the number of Travellers who passed through Alexandria to England and to India respectively, and were Passengers in the Oriental Steam Navigation Company's vessels, in each month of the year 1843 :—

Transit Establishment.	Waters Navigated.	Means of Conveyance.
Egyptian Transit Company	On the Canal	1 Steam Tug of 10 Horse Power.
		1 Steam Boat of 10 Horse Power.
		3 Passage Boats for Travellers.
Oriental Steam Navigation Company	On the Nile	1 Steam Boat of 24 Horse Power.
		1 Steam Tug of 24 Horse Power.
		3 Passage Boats for Travellers.
Oriental Steam Navigation Company	On the Canal	1 Steam Tug of 24 Horse Power.
		3 Passage Boats for Travellers.
		2 Iron Barges for Luggage, &c.
Oriental Steam Navigation Company	On the Nile	1 Steam Boat of 24 Horse Power.
		1 " " 36
		2 Iron Barges for Luggage, &c.

NUMBER OF TRAVELLERS.

Months.	To England.	To India.
January	45	75
February	108	90
March	57	64
April	94	30
May	139	31
June	21	14
July	22	15
August	2	17
September	111	98
October	38	58
November	17	66
December	77	85
„ By Government Steamers..	11	35
Total..... }	742	678
	1,420	

NOTE.—102 British subjects, of whom one-half or more were from India, quitted Alexandria by the French Government Steam Packets. 50 or 60 English persons arrived by the same conveyance, a few of whom were, no doubt, on their way to India.

Freights by the Steamer from Suez to Calcutta were £30 per ton for fine goods, and £15 per ton for coarse goods.

Statement of the number of British Subjects who were Permanent and Temporary Residents at Alexandria, in the year 1843:—

RESIDENTS.		Total.
PERMANENT.		
Natives of Great Britain	110	
" Malta.....	550	
" Ionian Islands.....	102	
" Gibraltar	46	
Enjoying Protection	27	
		835
TEMPORARY.		
Crews of Merchant Shipping	2,031	
Travellers to and from India	1,420	
" By French Packets	102	
		3,553
Total		4,388

Unclaimed Shares, how Disposed of.—No. 87.

Mr. Creed explained as follows, on the 26th June, 1846, to the Railway Acts Enactments Committee, with reference to the London and Birmingham Railway:—

"Have you any memorandum of any premium which those shares bore in the market at the time those different issues took place?—Yes. On the 30th of June, 1837, 2,500 £25 shares were issued; being a capital of £625,000: I do not see the premium at that date; but there were 155 shares not claimed, which were sold on the 6th of April, 1838, at a premium of £27 per share, the benefit of which the proprietors have received.

"It is to be presumed that the other shares bore something near that premium?—Something near, or rather below that.

"Was that in addition to the dividend?—No; it was merged in the account of profits. On the 14th of June, 1839, 31,250 £32 shares were created, representing a capital of £1,000,000 sterling, the premium on which, at the date of the issue, was from £10 to £12; 110 shares were not claimed, and they were sold at £22 premium in the year 1841, and equally accounted for in the profit and loss account. On the 12th of August, 1843, 55,000 £25 shares, representing a capital of £1,375,000, were created, to provide chiefly for the payment of the Northampton and Peterborough line, and the Warwick and Leamington. It seems that 240 shares were not claimed, and were sold to the proprietors at £20 premium, to make up any fraction they might be entitled to. That was the arrangement made with them, that each party might have the benefit of his shares, however small the portion might be. Though a proprietor had only £5 consolidated stock, he would have a share in whatever shares were created; or, if he chose it, he had an entire share, paying the difference. On the 7th of August, 1845, 68,750 £20 shares were created, representing a capital of £1,375,000, and 275

shares were not claimed, and were sold in the same manner as I have before mentioned, at £25 premium. This accounts for the whole of the shares that have been issued by the company.

"Are there any considerable number of shares that are not claimed still occasionally?—Very few indeed.

"When you had any, it has been the practice to sell them, and to divide the money amongst the proprietors as a bonus?—Yes.

"Quite independent of the dividend?—Yes. The first shares we sold were sold in the Auction Mart; the next shares were sold by two brokers, Messrs. Foster and Braithwaite and Mr. Moore, upon the best terms they could obtain in the stock market."

How are Railways got in France.—No. 88.

Mr. W. Reed thus explained, on the 12th May, 1846, to the Committee on Railway Acts Enactments:—

"What is the usual mode adopted by a party desirous of getting a railway constructed in France?—I can state how I am proceeding in a case myself at this particular time, and how we shall proceed: some three or four of us, afterwards extended to eight, conceived the idea that a line of railway, about 60 miles in length, would be a fair remunerating line. The Minister of Public Works was waited upon, and told that we had such an idea, and he was asked whether the government would look favourably upon such a project; he said 'Yes.' We then said, 'Will you be so good as to give us such facilities as are in the power of government to make the surveys?' 'Yes,' was his reply; and those facilities were accorded to us. We sent an engineer down, having first subscribed among ourselves, I think, £1,000 or something of that sort, to meet the expenses. He has made the survey; we have had the traffic taken; and we shall now look into it, and if we find that the thing is likely to be a beneficial affair, we shall urge the Minister to bring the project before the Chamber next year, and we shall in all probability get the concession.

"What expense will you incur?—Perhaps £1,000 will be spent. If, on the contrary, when we come to examine the thing more in detail, we should think the line not likely to be beneficial, we shall say, 'There is £1,000 lost,' and there will be an end of it.

"How is that expenditure of £1,000 incurred?—In making the surveys, and getting a statement of the traffic, and so on."

Reduction of Fares on the London and Birmingham Railway.—No. 89.

Mr Creed made the following remarks before the Committee on Railway Acts Enactments, on the 26th June, 1846:—

"The Committee understand that the London and Birmingham Railway Company have at different times made reductions in their fares and charges; can you state the particulars of them?—In September, 1844, the fares through, between London and Birmingham, were 32s. 6d. for the mail train, 30s. for the ordinary first class,

for the second class 25s. and 20s., and for the third class 14s. In October, 1844, they were 30s. and 27s. for the first class, for the second class 18s., and for the third class 9s. 5d. In April, 1845, they were for the first class 30s., 27s., and 23s.; for the second class 18s. and 16s.; and for the third class 9s. 5d. In May, 1845, we reduced to 27s. for the express, and 23s. and 20s. for the first class, the second class to 17s. and 14s., and the third class the same. In January this year the first class were reduced to 25s. for the express train, and 20s. for the ordinary first class, 14s. the second class, and the third class a penny a mile, 9s. 5d. In addition to the above reductions, on the 1st of January, 1845, day tickets were issued at one-third less than the regular fares; so that, while in 1844 a passenger from London to Birmingham and back paid 65s. or 60s. for the first class, and 50s. or 40s. for the second class, he now pays only 26s. 6d. for the first class, and 18s. 6d. for the second class.

"What is the extent of the difference between the prices charged originally and the present prices?—It is exactly one-third reduction.

"Have those reductions been attended, in any instance, with a loss of revenue?—The reductions on the first class, in the half-year ending 30th of June, 1844, were 17½ per cent., and it caused an increase in the number of passengers of 19½ per cent. In the second class it was 26 3-5 per cent. reduction in the fares, and there was an increase in the number of passengers of 61 1-5 per cent. In the third class the reduction in the fares was 33½ per cent., and the increase in the number of passengers 259 per cent. That is the effect of the reductions in the half-years ending the 30th June, 1844, and the 30th June, 1845."

Supervision of Railways.—No. 90.

Mr. C. A. Saunders remarked to the Committee on Railway Acts Enactments, on the 7th July, 1846, as follows:—

"My own opinion is, that it would be extremely injurious to the public. I have always thought so, and think so still. It would be a Board, in point of fact, for cloaking railway companies from the action of public opinion upon them, which does, as we all know, all the good that can be desired from them; whereas, if you have the intervention of some public Board, who are merely to know, or to be supposed to know, for they could not possibly know all that was passing (it would be impossible for the railway companies to be coming to the government Board in every particular case that may arise on every question of regulation, or assistance, or accommodation, or convenience, that could be given to the public), you will cloak the railway companies from the effect of public opinion, instead of doing the public any good.

"If that Board should think it their duty to publish, from time to time, reports stating the proceedings of every railway, and the comparative advantages and disadvantages afforded in different parts of the country, would not you consider that that would be giving publicity to, instead of cloaking the proceedings of the railway companies.—I cannot think so. I have seen its operation already of a government Board supervising; and my own opinion is that it is decidedly injurious to the public. As regards the companies, I think it may be some protection to them."

Farmers Benefited by Railways.—No. 91.

Mr. James Smith, of Deanston, thus answered the following questions to the Committee on Railway Acts Enactments on the 10th July, 1846:—

“Have you had occasion to consider the facilities afforded by railway conveyance to agricultural improvements?—Yes, I have.

“Will you state generally what you consider has been the result?—I have observed, upon those lines that have been in existence for some years, over which I have had occasion to travel, that a very great agricultural improvement of the lands in the neighbourhood has been the result, arising mainly from the cheapness and facility of transport; and I have drawn out some tables to illustrate that. I have one table taking a farm of 200 acres, and a six-course shift; the committee are aware that there are different shifts of rotation, and that some lands suit best to be cultivated upon one, and some upon the other. I have taken this farm upon the six-course shift, which is most suitable for the bulk of the medium land of England and Scotland; I have supposed that farm to be in most full cultivation, thoroughly improved, and to be both arable and pasture. I have taken the quantities of green and dairy produce, and cattle, and everything which I can conceive will be exported from that farm; and it amounts to 148 tons. I have then taken the imports, consisting of store cattle to be fed, lime and other matters, such as guano, and the different chemical manures which are now being introduced; and also seed, because the shifting of seed in a good farm is always attended to; and I have supposed that this weight shall be transported upon an average 15 miles, which I think is a very low estimate. The quantity imported will be 197 tons; making altogether, of imports and exports, 346 tons 14 cwt.

“That is all for 15 miles?—Yes. Then I have taken the expense of transport by railway at 1d. per ton per mile; on some railways it is considerably higher, and on some lower, but in the present advanced state of railways we may fairly assume that to be the general rate.

“For the produce transported, and the manure brought to the land?—Yes; taking it upon the average that I have taken, and also taking the number of persons that will travel to market and in various ways at 1d. per mile, the whole amount of charge of carriage for imports and exports is £40 8s. 9d. By the old mode of conveyance the expense would have been, assuming 6d. per ton per mile for the goods, which I find to be as low as you can carry it by the old mode, £142 16s. 3d.

“That is for the same distance?—Yes.

“On what principle do you assume 6d. to have been the charge by the ordinary roads?—I speak from my own experience of thirty years. I have had a great deal to do with carting, both for agricultural produce and manufacturing produce, and I have found that I could never get it done under 6d. a ton in England: it costs rather more than that.

“In giving an account of the produce of a farm, you deduct for home consumption?—Yes, I do.

“Therefore upon a farm such as you have stated, there would be a saving of £102 7s. 6d.?—Yes. Then taking that at 20 years purchase, it will give £2,047 10s.; if you take it at thirty years purchase, it will amount to £3,071 5s.

"Have you given the supposed rental of that farm?—No, I have not; the rental would be about £400.

"This expense, then, would be in addition to the rent?—Yes.

"And the same farm which without a railway would be only worth £400, would be worth £500 after a railway was established?—Yes; 10s. an acre more.

[The Witness delivered in the Table, which is as follows:]

STATEMENT OF THE PROBABLE EXPORTS AND IMPORTS FROM A FARM OF 200 ACRES,
ON A SIX-COURSE SHIFT.

EXPORTS.		Tons.cwt.lbs.		Tons.cwt.lbs.		
33½ Acres oats, 48 bushels per acre.....		30	0	0		
Deduct half for seed, horses, &c.		15	0	0		
28 Acres turnips, 25 tons per acre, will, with one feed of oil cake per day, feed 60 head of cattle, say three head per ton				15	0	0
5½ Acres potatoes, 10 tons per acre		53	6	74		
Deduct one-third for family use, &c.		17	15	62		
33½ Acres wheat, 32 bushels per acre		28	11	48		
Deduct one-fourth for seed, family use, &c.		7	2	96		
33½ Acres beans, 36 bushels per acre		34	5	80		
Deduct one-third for seed, horses, &c.		11	8	64		
33½ Acres barley, 42 bushels per acre		33	15	0		
Deduct one-tenth for seed		3	7	56		
33½ Acres grass, besides rearing young stock, say of dairy produce				30	7	56
Pigs				2	0	0
				1	15	0
				148	19	36

IMPORTS.

SEED, CATTLE, MANURE, LIME, &c.

12	Acres oats, at 6 bushels seed per acre.....	1	8	12
28	Acres turnips, at 6lbs. seed per acre	0	1	56
1	Acre potatoes, at 18 bushel seed per acre	0	9	0
12	Acres wheat, at 2½ bushels seed per acre	0	18	0
12	Acres barley, at 4 bushels	1	3	14
8	Acres beans, at 4 bushels	0	18	32
33½	Acres sown with grass seed	0	8	104
48	Lean Cattle, say 5 head per ton	9	12	0
10	Acres green crop, at 3 cwt. guano per acre	1	10	0
33½	Acres green crop, at 4 tons lime per acre	133	6	74
	Oilcake	8	0	0
	Coals	30	0	0
	Family articles, &c.	10	0	0
		197	15	68

	Tons.cwt.lbs.
Imports	197 15 68
Exports	148 19 36
	346 14 104

COMPARATIVE ESTIMATE OF EXPENSES BY RAILWAY AND BY COMMON ROAD.

Expense of transmitting the probable Exports and Imports for a year, from a Farm of 200 acres, 15 miles by Railway:—

347 tons, at 1d. per ton per mile	£21 13 9		
Say one person travelling by rail per day for 300 days, at 1d. per mile, 15 miles per day	18 15 0	£	s. d.
		40	8 9
Expense of transmitting the above by common road, with the exception of 29½ tons of cattle, 317½ tons, at 6d. per ton per mile	£119 1 3		
Expenses of cattle travelling by common road	3 15 0		
Say one person travelling per day for 200 days, at 2s. per day	20 0 0		
		142	16 3
Difference in favour of Railway	£ 102 7 6		
Twenty years purchase of the above difference	£2,047 10 0		
Thirty years purchase of the above difference	£3,071 5 0		

One Square Mile:—

Expense of transmitting the probable Exports and Imports from one square mile, or 640 acres, deducting 40 acres for Fences, &c.:

By railway	£121 6 3		
By common road	428 8 9		
Difference in favour of railway	£ 307 2 6		
Thirty years purchase of the above difference	£9,213 15 0		

TABLE,

COMPARATIVE OF THE EXPENSE OF TRANSMITTING THE PROBABLE AGRICULTURAL EXPORTS AND IMPORTS, &c., FROM A GIVEN NUMBER OF MILES ON EACH SIDE OF A RAILWAY, BY RAILWAY AND BY COMMON ROAD.

Miles on each side of Line.	Tons.	Expense by Railway.	Expense by Common Road.	Difference in favour of Railway.	Twenty years purchase of difference.	Thirty years purchase of difference.
		£ s. d.	£ s. d.	£ s. d.	£	£ s.
1	2,082	242 12 6	856 17 6	614 5 0	12,285	13,427 10
2	4,164	485 5 0	1,713 15 0	1,228 10 0	24,570	36,855 0
3	6,246	727 17 0	2,570 12 6	1,842 15 0	36,855	55,282 10
4	8,328	970 9 6	3,427 10 0	2,457 0 0	49,140	73,710 0
5	10,410	1,213 2 0	4,284 7 6	3,071 5 0	61,425	92,137 10
6	12,492	1,455 14 6	5,141 5 0	3,685 10 0	73,710	110,565 0
7	14,574	1,698 7 0	5,998 2 6	4,299 15 0	85,995	128,992 10
8	16,656	1,940 19 6	6,855 0 0	4,914 0 0	98,280	147,420 0
9	18,738	2,183 12 0	7,711 17 6	5,528 5 0	110,565	165,847 10
10	20,820	2,426 4 6	8,568 15 0	6,142 10 0	122,850	184,275 0

"Does not the value increase according to the proximity of the station?—Yes."

Products of America in 1847.—No. 92.

The following is a statement of the Total Value of the several products of Labour and Capital in the United States in the year 1847.

PRODUCTS.	VALUE.	
	Dollars.	£
Products of Agriculture	838,163,928	174,617,485
" Orchards	8,853,422	1,844,463
" Gardens	45,000,000	9,375,000
" Nurseries	724,111	150,867
Live Stock and its Products	252,240,779	52,550,162
Products of the Forest	59,099,628	12,307,423
" the Fisheries	17,069,262	3,556,096
Profits of Capital employed in Commerce, Trade, and Internal Transport (390,972,423 Dollars), at 6 per cent.	23,458,345	4,892,155
Products of Manufactures	550,000,000	114,583,333
" Mines	74,170,500	15,452,188
Profits of Capital of Insurance Companies	20,000,000	4,166,667
" Banks (208,216,000 Dollars), and of all other sums lent at interest	25,600,000	5,208,333
" Rents of Houses and Lands	50,000,000	10,416,666
" Professions	50,000,000	10,416,666

Cotton Produced and Consumed in America.—No. 93.

The following is a statement of the Amount of the Cotton Crop in the South-Western and other States, in each year, ending 31st August, from 1839 to 1848:—

Years.	South-Western States, viz.—Arkansas, Louisiana, Alabama, Florida.	All other States.	Total.
	Bales.	Bales.	Bales.
1839	911,913	448,619	1,360,532
1840	1,538,904	638,931	2,177,835
1841	1,231,334	403,611	1,634,945
1842	1,164,389	519,822	1,684,211
1843	1,703,048	676,827	2,378,875
1844	1,445,724	584,685	2,030,409
1845	...	...	2,394,503
1846	1,600,294	500,243	2,100,537
1847	1,157,293	621,358	1,778,651
1848	1,745,598	602,036	2,347,634

Statement of the Quantities of Cotton Consumed by and in the hands of the Manufacturers, in the United States, in each year, ending 31st August, from 1839 to 1848:—

Years.	Quantities.	Years.	Quantities.
	Bales.		Bales.
1839	276,018	1844	346,744
1840	295,193	1845	389,006
1841	297,288	1846	422,597
1842	267,850	1847	427,967
1843	325,129	1848	531,772

Population and Expenditure of the United States of America.—No. 94.

The following is a comparative statement of the Population and Public Expenditure, with the Average Rate thereof per Individual, in the United States, the State of Massachusetts, and the City of Boston, at different periods, from 1802 to 1845.

UNITED STATES.					STATE OF MASSACHUSETTS.			
Years.	Population.	Public Expenditure.		Years.	Population.	Expenditure.		
		Total.	Average Rate per Individual.			Total.	Interest and Debt Paid off.	Nett.
1802	No. 5,677,340	Dollars. 3,737,080	Dollars. 0.66	1841	No. 752,453	Dollars. 399,929	Dollars. 37,069	Dollars. 362,860
1810	7,239,814	5,311,082	0.73	1842	767,207	351,551	44,156	307,395
1820	9,638,131	13,134,530	1.36	1843	781,961	370,365	55,679	314,686
1830	12,866,920	13,220,534	1.03	1844	796,715	461,098	116,051	345,047
1840	17,063,353	23,327,772	1.37	1845	811,469	511,193	154,086	357,107
1845	19,914,362	21,380,049	1.07					

CITY OF BOSTON.					UNITED STATES.			
Years.	Population.	Expenditure.			Estimated Average Rate per Individual.			
		Total.	Interest and Debt Paid off.	Nett.	Aggregate Average of National Expenditure per Individual.			
1842	No. 96,746	Dollars. 631,196	Dollars. 147,709	Dollars. 503,494	State	Dollars. 0.97	Aggregate Average of Total Cost of Government in United States per Individual	
1843	102,819	642,354	183,619	458,735	Town or City	0.50		
1844	108,492	718,138	164,460	553,678		0.92		
1845	114,366	948,937	350,359	598,578			Aggregate Average of Total Cost of Government in United States per Individual	
								2.39
								Or 47,800,000 Dollars if the Population be 20,000,000.

Indian Corn Produced in America.—No. 95.

The following is a statement of the quantities of Indian Corn Produced in each of the United States in each year, from 1839 to 1844, and in 1847:—

STATES.	1839	1840	1841	1842	1843	1844	1847
Maine	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
New Hampshire	950,598	988,569	1,188,728	1,390,799	1,390,799	1,390,799	2,890,000
New York	1,162,572	1,217,275	920,183	1,330,925	1,330,925	1,330,925	2,850,000
Massachusetts	1,809,198	1,905,273	2,202,113	2,347,451	2,347,451	2,347,451	3,410,000
Rhode Island	450,498	471,022	542,896	578,720	578,720	578,720	810,000
Connecticut	1,300,441	1,521,191	1,827,771	1,996,458	1,996,458	1,996,458	3,150,000
Vermont	1,119,678	1,167,219	1,391,595	1,522,853	1,522,853	1,522,853	2,400,000
New Jersey	10,972,286	11,441,256	13,311,616	15,574,590	15,574,590	15,574,590	16,000,000
Pennsylvania	14,240,022	19,969,472	13,553,360	15,857,431	15,857,431	15,857,431	20,200,000
Delaware	2,095,369	2,164,507	2,381,766	2,789,982	2,789,982	2,789,982	3,630,000
Virginia	8,233,086	6,998,124	5,615,640	6,205,282	6,205,282	6,205,282	8,300,000
North Carolina	34,577,591	33,987,255	38,101,657	46,896,788	46,896,788	46,896,788	36,500,000
South Carolina	23,893,763	24,116,253	25,332,194	27,916,077	27,916,077	27,916,077	25,000,000
Georgia	14,722,805	14,987,474	16,492,216	18,190,913	18,190,913	18,190,913	12,600,000
Alabama	20,905,122	21,749,227	24,072,043	26,960,587	26,960,587	26,960,587	25,000,000
Mississippi	20,947,004	21,594,354	26,345,105	24,817,089	22,200,000	16,650,000	26,000,000
Louisiana	13,161,237	5,985,954	7,693,771	9,386,359	2,709,000	2,167,000	16,000,000
Tennessee	5,992,912	6,224,149	7,857,362	8,957,352	7,600,000	8,360,000	9,000,000
Kentucky	44,996,188	46,285,359	55,742,384	67,838,477	61,100,000	70,255,000	74,000,000
Ohio	39,847,120	40,847,130	49,033,849	59,355,156	47,500,000	54,625,000	62,000,000
Indiana	35,432,161	39,434,291	38,651,198	38,651,198	48,000,000	57,600,000	66,000,000
Illinois	33,195,108	33,195,108	38,838,975	36,677,171	34,500,000	30,625,000	38,000,000
Missouri	29,634,211	23,434,474	25,546,738	32,750,434	19,680,000	25,584,000	33,000,000
Arkansas	17,332,524	19,725,146	25,338,922	27,193,608	12,500,000	13,625,000	23,000,000
Michigan	4,846,632	6,039,460	7,816,253	8,592,428	7,500,000	8,250,000	7,000,000
Wisconsin	898,974	694,205	7,703,385	3,592,428	4,300,000	4,945,000	6,500,000
Iowa	379,359	521,244	769,430	838,667	1,100,000	733,000	1,000,000
Florida	1,406,241	1,847,215	1,783,380	2,128,416	1,690,000	2,028,000	2,900,000
Columbia District	39,485	43,725	45,998	47,837	44,000	35,000	45,000
Texas .....	.....	.....	.....	.....	.....	.....	1,500,000
Oregon .....	.....	.....	.....	.....	.....	.....	525,000
Total { W. Bushels	377,531,875	387,350,185	441,859,246	494,618,306	421,953,300	417,899,000	539,350,000
Impr. Qrs.	45,717,477	46,909,319	33,502,760	59,895,185	51,065,871	50,604,587	65,311,913

NOTE.—The addition of the columns for 1840, 1841, and 1842 exceeds the given totals by 4,350,000; 5,000; and 1,000,000 bushels respectively; for 1843 it is less by 10,000. The crop for 1845 was estimated to be the same as that of 1844; but the crop of 1846 promised to be larger than any one in previous years.

Railway Fares in America.—No. 96.

The following is a statement of the amount of Through Fares, and the Rate thereof per Mile, charged upon each of the principal Railroads in the United States in the year 1848:—

Name, Commencement, and Termination of Railroad.	Length of Line.	Fares.	
		Charged Through.	Rate per Mile.
	Miles.	Drs.Cts.	Cents.
Eastern Railroad—Boston to Portland	105	3.00	2.85
Boston and Maine " "	110	3.00	2.72
Boston and Lowell " to Lowell	26	0.65	2.5
Boston and Worcester " to Worcester	44	1.25	2.8
Boston and Providence " to Providence	42	1.25	2.97
Fitchburg " to Baldwinsville	71	1.75	2.46
Fall River " to Fall River	53	1.35	2.54
Old Colony " to Plymouth	37½	1.00	2.66
Western—Worcester to Albany	156	3.75	2.27
Nashua and Lowell—Lowell to Nashua	15	0.40	2.66
Concord—Nashua to Concord	34	0.80	2.35
Norwich and Worcester	60	1.50	2.5
New Haven and Springfield	62	1.87	3.00
Bridgeport	98	2.00	2.04
New Haven and Harlem	53	1.00	1.88
New York and Erie	87	1.50	1.72
Long Island	95	2.00	2.1
Camden and Amboy—New York to Philadelphia ..	90	3.00	3.33
New York and New Brunswick	33	0.75	2.27
New York and Philadelphia	88	4.00	4.54
Reading—Philadelphia and Pottsville	92	3.00	3.26
Philadelphia and Baltimore	97	3.00	3.01
Westchester and Columbia	32	0.75	2.34
Philadelphia, Lancaster, and Harrisburgh	107	4.00	3.73
" Germantown and Norristown	17	0.40	2.38
Harrisburgh and Chambersburgh	56	2.12	3.78
Baltimore and Ohio—Baltimore to Cumberland ..	179	7.00	3.91
Baltimore and Washington	40	1.60	4.00
Baltimore and Susquehanna	71	2.13	3.00
Washington and Richmond (including portage) ..	133	5.50	4.13
Louisa—Gordonsville	50	3.25	6.5
Richmond to Petersburg	22½	1.00	4.34
Winchester and Potomac	32	2.00	6.25
Petersburgh and Roanoke—Weldon	63	3.00	4.76
Weldon to Wilmington	161½	4.00	2.48
Gaston and Raleigh	87	4.00	4.6
South Carolina—Charleston to Augusta	136	6.75	4.96
Columbia—Branchville to Columbia	68	3.38	4.97
Georgia—Augusta to Atlanta	171	7.00	4.09
Athens Branch	39	1.95	5.00
Western and Atlantic—Dalton	100	5.00	5.00
Central—Savannah to Macon	191	7.00	3.65
Macon and Western—Atlanta	101	4.00	3.96
Montgomery and West Point	60	3.00	5.00
Vicksburgh and Jackson	47	3.00	6.38
Albany and Schenectady	17	0.50	2.94
Greenbush and Troy	6	0.20	3.33
Troy and Schenectady	20½	0.50	2.43
Utica and Schenectady	78	3.00	3.84
Utica and Syracuse	53	2.00	3.77
Syracuse and Auburn	26	1.00	3.84
Auburn and Rochester	77	3.00	3.89

RAILWAY FARES IN AMERICA—continued.

Name, Commencement, and Termination of Railroad.	Length of Line.	Fares.	
		Charged Through.	Rate per Mile.
	Miles.	Drs.Cts.	Cents.
Rochester and Attica	44	1.56	3.54
Attica and Buffalo	31½	0.94	2.98
Buffalo and Niagara Falls	22	0.75	3.4
Lockport	24	0.75	3.12
Michigan Central—Detroit to Kalamazoo	146	4.40	3.00
Detroit and Pontiac	25	1.00	4.00
Erie and Kalamazoo—Toledo to Adrian	33	1.00	3.00
Southern Michigan—Monroe to Hillsdale	70	2.00	2.85
Mad River—Sandusky to Bellefontaine	102	3.25	3.18
Little Miami—Cincinnati to Springfield	84	2.00	2.38
Lexington and Ohio	28	1.25	4.46
Mansfield and Sandusky	56	1.50	2.67
Madison and Indianapolis	86	3.00	3.48

Extent of Railroads in America.—No. 97.

The following shows the Extent of Railroads opened for use, and the amount of Capital Invested therein, in the United States, in each year, from 1830 to 1847 :—

Years.	Extent.	Capital.
	Miles.	Dollars.
1830	155	2,510,000
1831	17	1,462,966
1832	29	500,000
1833	151	4,094,000
1834	86½	2,838,638
1835	287	11,750,000
1836	316½	7,587,114
1837	237	6,682,578
1838	571½	14,508,693
1839	340½	12,736,000
1840	279½	4,350,000
1841	183½	5,100,000
1842	277½	6,613,654
1843	509½	11,090,300
1844*	..	....
1845	410	19,094,294
1846	484	9,186,000
1847	205	2,410,000
Total in 15 Years	5,740	{ Drs. 122,525,937 £ 25,526,236

* 1844 is blank, because no lines were opened for use in that year.

Statistics of American Railways.—No. 99.
Statistics of the Railways in operation in the State of New York in the year 1847.

NAME.	Length.	Cost of Construction.	Receipts.			From Passengers.		Expenses for Repairing and Running the Roads.	Dividends.	Passengers Carried.		Miles Run by Trains.			Average Number of Men Employed.
			Through.	From Passengers.		Freight, &c.	Through.			Way.	With Passengers.	With Freight, &c.	Total.		
				Way.	Total.										
														Dollars.	
Albany and Schenectady	17	1,521,216	110,051	NIL.	110,051	54,325	60,310	25,000	229,401	NIL.	49,674	22,821	72,495	101	
Utica and Schenectady	78	2,833,380	413,771	96,011	509,782	188,932	224,632	160,000	167,264	99,269	148,800	131,200	280,000	452	
Syracuse and Utica	63	1,429,442	240,348	45,593	285,941	64,238	124,632	80,000	134,999	63,512	105,000	86,000	160,000	250	
Auburn and Syracuse	26	771,283	..	..	123,848	33,261	61,969	32,000	129,977	10,628	57,952	18,196	76,148	113
Auburn and Rochester	794	2,087,797	228,795	105,915	334,710	61,037	154,614	112,000	90,384	98,963	145,809	77,307	223,116	230	
Tonawanda	43½	805,530	135,168	23,022	158,990	37,758	53,719	37,000	98,969	35,068	77,354	14,500	91,854	230	
Albion and Buffalo	31	487,543	96,764	7,246	104,010	32,778	43,000	33,590	113,259	15,560	59,211	17,580	76,791	30	
Buffalo and Niagara Falls	22	171,675	..	..	43,795	8,316	18,879	13,879	66,294	12,212	..	..	26,596	25
Saratoga and Schenectady	22	300,000	22,227	14,273	36,500	7,295	30,288	24,750	..	28,727	..	..	23,628	28
Schenectady and Troy	20½	638,366	31,778	1,454	33,232	12,889	38,337	53,468	..	5,410	51,188	3,321	54,508	28	
Rensselaer and Saratoga	25	475,801	28,920	11,643	40,563	20,707	37,718	21,000	34,100	42,193	24,795	9,418	34,144	..	
Long Island	984	2,043,325	..	..	114,646	44,098	44,220	NIL.	191,316	..	110,093	64,270	174,363	140
Albany & WestStockbridge	38½	1,789,808	..	..	..	..	..	105,369	39,077	54,786	103,672	224,408	..	..
Troy and Greenbush	6	290,242	..	..	..	..	..	198,152	..	47,628	6,816	54,444	..	..
New York and Harlem	53	1,874,892	42,378	183,227	225,605	29,696	42,756	NIL.	198,152	1,335,892	..	..	..	200
Troy and Greenbush	6	290,242	..	..	..	..	..	198,152	..	47,628	6,816	54,444	..	..
New York and Erie	62	2,759,835	37,342	63,648	100,990	153,128	172,970	NIL.	35,506	118,788	80,800	69,832	159,632	182	
Hudson and Berkshire	31	275,613	906	5,876	6,782	22,034	23,500	906	..	12,736	..	..	..	..
Buffalo and Black Rock	3	20,000	..	..	2,354	..	..	20,492	..	..	..	..	..	..
Buffalo and Tonawanda	29	18,000*	3,410	170	3,580	17,644	21,088	3,456	..	21,540	11,160	32,700	..	..
Cayuga and Susquehanna	39	..	..	..	..	..	..	..	..	..	..	..	..	..
Shanectoes and Jordan	(Not Reported.)	28,211	817	275	1,092	2,277	2,554	2,598	815	1,538	8,320	6,760	15,080	5	

* The price paid to the State by A. M. for road, including price of locomotives, &c., to put road in operation.

Ancient Customs may produce Railway Passengers.—No. 99.

The revival of the Coventry pageant—the procession of the Lady Godiva—on Monday week, must have been very productive to the Railway, as there were upwards of 15,000 visitors in Coventry on that day. This hint might be improved upon by those Companies whose lines touch the localities or scenes of ancient revels;—by promoting a healthy revival of those festivals and sports so interesting to the population generally, great good would result, besides that of helping to fill their treasuries. It is only this week we have had something of the kind in the neighbourhood of the metropolis, where rural sports have been revived at a suburban fair, and the wonted harmless gaiety of such scenes obtained a renewed existence.—*Railway Chronicle*, 8th July, 1848.

Railways beneficial to Agricultural Districts.—No. 100.

Mr. Smith, of Deanston,—whose authority on agricultural economy deservedly stands so high,—has suggested that a Railway might confer important advantages on agricultural operations, in evidence before a Committee of the House of Commons, in 1846, of which the following is a condensed statement:—"I have drawn out a Table to illustrate the agricultural improvement which is the result of the cheapness and facility of transport produced by Railways which have been in existence some years. One Table is based on a six-course shift, because, although some land suits best to be cultivated upon one shift and some upon another, the six-course shift is the most suitable for the medium land of England and Scotland. I have supposed the farm to be in the highest cultivation, thoroughly improved, and to be both arable and pasture. The quantities of green and dairy produce, cattle, and everything that can be exported from the farm, are counted at 148 tons; the imports, consisting of store cattle to be fed, lime, guano, &c., at 197 tons; and supposed this weight to be transported on an average 15 miles, which is a very low estimate. Thus we have for imports and exports a gross quantity of 346 tons 14 cwt. Taking the expenses of transport by Railway at 1d. per ton per mile, and taking the number of persons who will travel to market and in various ways at 1d. per mile, the whole amount of charge of carriage, for imports and exports, is £40 8s. 9d. By the old mode of conveyance the expense would have been, assuming 6d. per ton per mile for goods, which is as low as you can carry by the old mode, £142 16s. 3d. I have had a good deal to do with carting, both for agricultural and manufacturing produce, and I have found that I could never get it done under 6d. a ton. Therefore, upon such a farm there would be an annual saving of £102 7s. 6d.; taking that at twenty years' purchase, would give £2,047 10s. The rental of such a farm would be £400 a-year without a Railway; with a Railway it would be worth 10s. an acre more, or £500 a-year." As an example of the effects of Railways in raising the value of land, Mr. Smith referred to the Edinburgh and Glasgow, which "passes through a considerable district of very inferior, very ill-cultivated land. Since the introduction of the Railway, and the facilities given for bringing tiles and lime, a great extent of that inferior land has been cultivated, and raised in annual value from 5s. to 30s. or 40s. an acre." With respect to stock, "the rate hitherto charged for the conveyance of stock is nearly the same per mile as the expense of driving, especially in fat stock; but there is a loss in the case of fat bullocks, on a drive of from 60 to 70 miles, of at least 5 per cent. on the value of the beast—equal to the whole expense of driving."

Anonymous Statements got up for Railway purposes.

No. 101.

The following is one of the many tricks acted by unscrupulous persons to forward their cause before Railway Committees, and has reference to the Great Northern:—

June 8th, 1848.—Sir J. Graham said, in reference to this bill, a printed statement had yesterday, at the door of the House—nay, almost within the House itself—been circulated and placed in the hands of members, containing against Mr. Milnes and the Rev. Mr. Neville (the purchaser of an estate formerly belonging to the late Lord Spencer) grave allegations of corruption and misconduct. It was imputed to Mr. Milnes and Mr. Neville, that, for the corrupt purpose of obtaining further compensation for their lands, they had got up an opposition to the bill in question, but which they did not afterwards proceed with, and, not content with taking a review of their conduct, the statement went on to allege that on a former occasion the bill had been rejected by a majority of 178 to 34; and that this had been effected by the union of those two gentlemen with the London and York; and that by these means a packed majority had been obtained. Now, this was a great abuse, and a breach of privilege. Still, however, he did not wish to take any step in the matter further than to solemnly deny, on the part of Mr. Milnes, that he had been actuated by any such motives as those attributed to him. —Mr. M. Milnes begged to substantiate this statement. His father had taken no part whatever in the opposition, and he himself had absented himself from the House on the division referred to. He felt that something ought to be done to put a stop to the circulation, apparently under the sanction of the House, of such anonymous libels.—Lord Galway disclaimed, on the part of the Rev. Mr. Neville, the conduct imputed to that gentleman by the document now before the House, and which was without any printer's name.—Sir J. Graham said it was an anonymous publication, against which the gentlemen aggrieved could not take any proceedings out of the House; and, what made it still more offensive was, that the charges were made in the name of a great company.

Railway Proprietor's Opinion of Engineers in 1848.—No. 102.

The very serious fall in value of Railway Shares in 1848 caused Proprietors to think, and many soon found out that they had wasted much capital in Engineering and Law. On this head Mr. William Rawson made the following remarks, in a letter to Mr. Houldsworth, published in the "Manchester Times," 14th Oct., 1848, with reference to stopping some of the works on the Lancashire and Yorkshire Railway:—

"I do not believe the line from Sowerby Bridge to Bradford will be made. I feel confident that the proprietors—if you would, sir, allow us to approach them with our reasons for what we recommend—will not be so wanting to themselves as to fall in almost universal appeal to the Board in favour of, at once, buying off the contractor, closing the engineer's office, and, as near as may be, closing the capital account. For what purpose should the engineer's office—that calculating machine—be kept going?"

Dividends not Paid out of Capital.—No. 103.

Whatever may have been done to increase dividends on some Railways, Mr. Glyn told the proprietors of the London and North Western Railway, at the meeting held 18th February, 1848, as follows:—

"It is generally propounded, that Railway Companies are in the habit of making up and declaring their dividends out of other than their real profits; and that, from this cause, a serious depreciation in the property of Railway Companies has naturally been produced. It might perhaps be unnecessary for me, in this room, to do more than call upon you to credit the denial which I absolutely give to any such allegations, as far as we ourselves are concerned; but that would not satisfy me or my colleagues on the present occasion. We must stand before you entirely free from any imputation of this sort; we must show you that your property is based upon *bona fide* transactions—that we account to you honestly and honourably for your earnings. What you do earn you shall have; but you shall not have, with the consent of your Directors, one farthing which we think ought to be applied to the future advantage of the property in question. You shall not take, if we can help it, and apply to any other purpose, what should be properly appropriated to keeping up your stock, with a view to the safety of the public, and, I may add, with a view also to the real increase in value of your property."

Reduction of Wages.—No. 104.

The "Railway Chronicle," 8th July, 1848, writes,—

"We regret to copy the following instance of the severe commercial pressure, which has been practically teaching high and low the necessity of stringent economy. The wages of the officials belonging to the Eastern Counties, where they exceed £1 per week, says the *Essex Standard*, have been reduced. The reduction varies from 1s. to 2s., 3s., 4s., and upwards, per week. This comparatively small reduction will effect a saving of several thousand pounds per annum in the item of expenditure of that Company."

"Bearing" in the Share Market.—No. 105.

Any person out of doors, or member of an Exchange, who observes a particular stock tending downwards in price, may, if he have sufficient nerve, throw on the market a large quantity of shares, *not one of which he possesses*. As a natural consequence, the stock falls, when the Bear steps in, and re-purchases what he has sold, but at a lower price, thereby pocketing the difference. Now, it is quite clear that a time like the present is a very harvest for those who choose to follow this system. All that is required to play the game successfully is a lax conscience and bold heart. They can always flood the market to any extent, for they can as easily sell 1,000 as 100 shares, if it suit their purpose; real holders, seeing the depreciation, become alarmed, and play into the hands of Bears, by rushing in to sell. Where money is to be gained so easily, the conscience is apt to sit lightly in the bosom, and this may account for the coolness with which these practices are followed; but, as lookers on, we have no hesitation in stigmatising the system as little, if at all better, than unprincipled gambling.

Gauge Contest.—No. 106.

The "Railway Chronicle," of the 3rd June, 1848, says:—

"It was on Thursday decided by the Committee of the Commons 'that the double gauge should be laid from Fenny Compton to Wolverhampton; the mode of laying to be such as the Railway Commissioners may approve,' and protective clauses being offered for the Buckinghamshire interests. By this decision the settlement of the Gauge question, to attain which a commission was appointed in 1845 and legislation took place in 1846, is sent to the wind. The country have to thank the Railway Department of Government for this. It is they who modified the Gauge Commissioners' recommendations by their minutes of the 6th of June, 1846, until they became absurd. It is they who modified their own Report of June 6th, 1846, still further in the resolutions which both Houses adopted on the 17th and 18th of June, 1846. It is they who brought in the Gauge Act, at the end of 1846, and drew the second clause so as to cut the throat of the preamble. It is they, through Mr. Milner Gibson (then in his capacity of Vice President of the Board of Trade, the protecting deity of the Railway interests), who prevented the Gauge Act from being amended at the time, by assuring the House that it was expressly framed to prevent the Double Gauge from extending itself to Birmingham; and through Lord Clarendon, who said the Act was merely to carry out the resolutions of the House—which, by-the-by, turns out to be neither more nor less than contrary to fact, if the Broad-gauge party are to be believed, who say that he promised a deputation of their body to insert words in the second clause which should leave the Birmingham-gauge question open to committees, and so defeat the resolutions."

Can Directors get Money from Proprietors of Railways?

No. 107.

At a meeting of the Lancashire and Yorkshire Railway Company, 6th September, 1848, the Chairman, Mr. Houldsworth, said,—

"We, then, have in prospect lines that are not begun, but contemplated to be begun, and, in fact, it is desirable that they should be begun as soon as we can command the necessary funds."

To these remarks Mr. William Rawson replied as follows, in a letter to Mr. Houldsworth, published in the "Manchester Times," 16th September, 1848:—

"Why, sir, you can always '*command the necessary funds.*' The Board, like Shylock, is in possession of the *bond*. Armed with the Act of Parliament you can go on raising the money; for, if one set of proprietors be *ruined* thereby, the stock certificates will still remain the same. Though all the original proprietors may be driven out of the Company, you will still have the power of raising money from those who have had the better fortune to obtain their shares almost for nothing—who have, indeed, in some instances, received a bonus with their shares. It is not your power to raise the money that I dispute, but I question the wisdom and the humanity of the men who would use that power *at such a time* for such a purpose."

Reproductiveness of Railway Capital.—No. 108.

H. Brown, Esq., M.P., states, in his "Irish Wants and Practical Remedies," published in June, 1848,—

"Above sixty millions of passengers were carried in 1847, with very small loss of life or accident. (Half year ending the 31st December, 1847, 31,734,607 passengers, eight killed.) At least twenty millions of tons of goods and materials were moved by Railways, of which not less than ten millions of tons were coals. Of live stock, half a million of cattle must have been conveyed; two millions of sheep, and half a million of pigs. An immense economy in the conveyance of this mass of human beings, and of live and dead produce, must have been effected; and vast results must have accrued from a system of locomotion, which allows of the speedy removal of men and goods to those places where they can be most usefully employed. We must, however, look at this extraordinary organization of modern times in another point of view. By a return made on the 1st of May, 1847, there were then permanently employed on the Railways 47,218 persons. These must now be 50,000. There were employed at the same date in the construction of Railways 256,509 persons, making the total employed on lines of Railway, and in construction, 303,727. Of these, the number of artificers, labourers and miners was 270,335, besides other descriptions of persons employed in rough labour. This number of 303,727 is exclusive of colliers, men employed in iron-works, engine and coach factories, brick-makers, and very many other trades connected with Railway employment. These men, too, are mostly heads of families, having others dependent upon them for subsistence. If the whole number of persons employed be taken at 400,000, and these be multiplied by five, it will give 2,000,000 of persons, or a number equivalent to a quarter of the population of Ireland, obtaining Railway employment in England. Railways are therefore capable of giving profitable and productive employment on a large scale; they have been proved to be so in England, Scotland, and partially in Ireland; why, then, should they not be largely applied to Ireland?"

Dinners do not pay Surveyors' Bills.—No. 109.

June 13th, 1848.—In the Court of Exchequer, in "*Re Julian v. Joll*," the action was brought for work done for the plaintiff in 1845, in surveying the projected lines of the Canterbury and Heme Bay and the Great Kent Atmospheric; and subsequently for other miscellaneous work. The total amount was for £54 8s., but a sum of £22 10s. was credited as paid on account to the plaintiff, and £15 was paid into Court, leaving a balance of £16 18s., now claimed. The plaintiff had been long on very friendly terms with, and a frequent visitor at the house of the defendant, and often breakfasted, dined and supped there. A set-off was now made by the defendant of £16 16s., on account of these entertainments. Several witnesses, principally fellow-labourers with the plaintiff, in the defendant's service, proved the work done; that it was well done; that the plaintiff was a person of ability in his profession; and that the sum of a guinea a-day and 15s. for expenses, paid during the Railway surveys, was "ridiculously low," considering the great demand for surveyors during the mania; the common remuneration being from five to ten guineas a-day, and sometimes more. The jury returned a verdict for the plaintiff for the amount claimed.

Vessels belonging to the United Kingdom in 1846.—No. 110.

Some idea of the Shipping Interest may be formed from the following Return of the Number and Tonnage of Sailing Vessels Registered at each of the Ports of Great Britain and Ireland, including the Isle of Man and Channel Islands, distinguishing those under and those above Fifty Tons Register, on the 31st day of December, 1846 also, a similar Return of the Number of Steam Vessels and their Tonnage.

	SAILING VESSELS.				STEAM VESSELS.			
	Under 50 Tons.		50 Tons and upwards.		Under 50 Tons.		50 Tons and upwards.	
	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage	Vessels	Tonnage
ENGLAND:								
London.....	731	23,860	2,116	558,018	90	2,825	197	53,085
Aberystwith..	98	3,099	63	4,926	..	..	..	..
Aldborough..	17	537	15	1,081	..	..	..	..
Arundel.....	19	689	32	3,936	..	..	..	..
Barnstaple...	58	1,941	34	2,791	..	..	..	..
Beaumaris....	149	4,517	100	10,435	..	..	..	..
Pwllhell.....	84	2,750	93	8,517	..	..	1	70
Berwick.....	32	1,027	42	4,496	..	..	2	295
Bideford.....	64	2,116	83	9,689	..	..	..	..
Boston.....	124	4,579	54	3,724	2	40	..	..
Bridgewater...	48	1,932	62	6,605	1	15	..	..
Bridlington...	18	533	14	2,549	..	..	..	..
Bridport.....	2	62	18	2,135	..	..	..	..
Bristol.....	119	3,549	148	31,411	10	267	18	3,687
Cardiff.....	18	523	38	4,869	4	109	..	..
Cardigan.....	159	4,760	100	9,040	..	..	..	..
Carlisle.....	14	572	26	1,763	..	..	3	607
Caernarvon...	90	956	69	8,658	..	..	..	..
Chepstow.....	38	1,631	16	1,433	2	48	1	53
Chester.....	59	2,164	52	3,702	3	119	3	266
Chichester...	36	796	11	991	..	..	..	..
Clay and Wells	115	2,272	61	5,541	1	18	..	..
Colchester...	196	4,344	56	4,909	..	..	..	..
Cowes.....	124	3,035	53	5,322	..	..	..	..
Dartmouth...	188	5,172	256	25,670	..	..	..	..
Deal.....	14	289	..	..	..	..	..	..
Dover.....	79	2,113	31	3,051	..	..	2	107
Exeter.....	52	1,581	125	15,297	1	17	..	..
Falmouth.....	47	1,268	69	5,895	..	..	..	..
Faversham...	216	4,487	69	5,715	1	9	..	..
Fowey.....	32	1,208	86	7,848	..	..	..	..
Gatesborough	8	337	6	488	1	49	1	56
Gloucester...	235	6,666	63	7,669	1	34	1	91
Goole.....	221	9,863	237	18,927	1	16	4	279
Grimsby.....	31	709	5	612	..	..	..	..
Gweek.....	8	259	1	79	..	..	..	..
Hartlepool...	4	131	69	15,776	2	39	..	..
Harwich.....	77	2,209	53	4,415	..	..	..	..
Hull.....	146	5,405	295	58,907	6	148	21	4,061
Ipswich.....	55	1,499	123	12,758	3	83	1	94
Lancaster...	42	1,464	52	4,388	1	42	1	134
Liverpool.....	131	4,349	1,275	376,032	14	585	46	6,569
Llanely.....	37	1,106	41	4,129	2	49	..	..
Carmarthen...	15	388	3	283	..	..	..	..
Lyne.....	5	158	6	531	..	..	..	..

ENGLAND, (continued.)	SAILING VESSELS.				STEAM VESSELS.			
	Under 50 Tons.		50 Tons and upwards.		Under 50 Tons.		50 Tons and upwards.	
	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.
Lynn	34	974	118	15,512	1	13	1	194
Maldon	109	2,967	44	4,043	..	..	..	....
Maryport	26	872	82	12,195	..	..	..	....
Milford	74	2,163	67	7,144	..	..	..	....
Newcastle	39	1,445	1,296	297,925	138	2,380	4	601
Newhaven	10	225	7	994	..	..	..	....
Newport	27	1,004	55	8,738	1	31	1	58
Padstow	66	2,337	38	4,197	..	..	..	....
Penzance	35	956	51	6,817	..	..	..	....
Plymouth	199	6,070	190	2,618	3	69	2	272
Poole	37	1,123	69	11,853	..	..	1	74
Portsmouth	146	3,620	64	9,434	2	74	1	54
Preston	77	2,769	28	2,857	3	85	11	1,875
Ramsgate	125	3,349	30	2,845	..	..	5	711
Rochester	295	8,705	68	7,525	4	124	1	89
Rye	45	1,085	25	2,578	..	..	..	....
Hastings	28	529	10	787	..	..	..	....
St. Ives	46	1,106	88	8,171	..	..	3	498
Scarborough	51	1,420	138	29,412	..	..	..	....
Scilly	17	399	41	4,533	..	..	..	....
Shoreham	47	946	41	6,814	..	..	..	....
Southampton	136	3,320	70	9,032	11	381	13	1,970
Stockton	17	504	141	25,81	24	528	1	64
Sunderland	60	1,693	791	176,298	18	311	1	282
Swansea	75	2,355	98	14,570	6	107	4	341
Truro	12	463	28	2,525	1	18	..	....
Weymouth	25	747	50	5,850	..	..	1	57
Whitby	45	1,618	313	52,006	1	45	..	....
Whitehaven	15	495	248	40,866	1	37	3	604
Workington	2	62	73	12,013	..	..	..	....
Wisbech	35	1,370	63	6,608	2	37	1	63
Woodbridge	20	697	26	1,867	..	..	..	....
Yarmouth	345	10,378	343	36,786	5	86	4	553
	6,375	189,569	11,017	2,121,385	367	8,838	360	77,795
SCOTLAND.								
Aberdeen	62	1,556	259	47,610	4	100	10	3,851
Peterhead	3	127	16	3,704	..	..	..	....
Ayr	13	469	28	3,932	..	..	..	....
Alloa	36	1,171	82	17,591	..	..	4	308
Arbroath	20	850	66	6,960	..	..	..	....
Banff	29	926	82	7,788	..	..	..	....
Borrowstoness	44	1,332	47	4,612	..	..	..	....
Campbeltown	23	524	3	1,282	..	..	2	233
Dumfries	94	2,938	48	5,731	..	..	..	....
Wigtown	46	1,539	22	2,644	..	..	1	146
Dundee	44	1,538	269	45,765	1	23	6	1,416
Glasgow	66	2,189	881	121,355	12	68	53	10,591
Grangemouth	7	291	37	5,533	3	56	..	....
Greenock	198	5,430	232	75,897	1	39	6	507
Inverness	145	3,721	86	7,087	1	40	..	....
Irvine	38	1,041	80	14,854	..	..	2	342
Kirkcaldy	35	1,212	43	8,370	..	..	2	145
Anstruther	48	1,422	17	1,619	..	..	1	57
Kirkwall	28	645	35	4,117	..	..	..	....
Leith	84	2,392	113	18,422	9	200	7	2,012
Dunbar	14	515	9	775	..	..	..	....
Lerwick	64	1,450	8	695	..	..	..	....

	SAILING VESSELS.				STEAM VESSELS.			
	Under 50 Tons.		50 Tons and upwards.		Under 50 Tons.		50 Tons and upwards.	
	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.	Vessels	Tonnage.
SCOTLAND. (continued.)								
Montrose	21	755	95	14,056	..	..	2	177
Perth	12	349	76	8,358	1	19	..	..
Port Glasgow . .	28	966	34	11,539	..	..	5	504
Stornoway . . .	42	1,108	15	1,857	..	..	..	..
Stranraer	30	929	6	870	..	..	..	..
Wick	17	478	19	1,520	..	..	..	..
	1,291	37,863	2,208	443,343	32	945	101	20,289
IRELAND.								
Baltimore	115	2,735	8	1,053	..	..	..	..
Belfast	136	4,698	286	56,743	1	16	4	637
Coleraine	13	351	2	629	..	..	..	..
Cork	164	4,060	218	37,779	4	161	15	4,184
Drogheda	8	219	36	4,085	..	..	7	2,039
Dublin	279	8,093	126	22,537	4	161	42	10,740
Dundalk	7	227	14	1,232	..	..	2	545
Galway	6	118	14	3,498	..	..	..	..
Limerick	48	1,345	62	12,952	..	..	..	..
Londonderry . . .	12	280	25	7,553	..	..	6	1,475
Newry	163	4,923	58	7,056	..	..	1	203
Ros	3	91	19	5,751	..	..	..	..
Sligo	7	183	21	3,973	1	44	1	56
Tralee	1	18	..	..	..	..	..	..
Waterford	67	1,654	123	23,572	..	..	8	1,884
Westport	4	89	2	228	..	..	..	..
Wexford	35	1,313	73	6,333	..	..	1	228
	1,067	30,397	1,087	194,926	10	382	87	21,991
Guernsey	24	751	96	12,512	..	..	..	..
Jersey	142	3,049	178	25,595	1	39	..	..
Isle of Man . . .	261	5,908	62	2,531	..	..	5	977

Railway and Canal Dividends.—No. 111.

In "Herapath's Railway Journal" of the 30th September last, it appears that the capital expended on Railways now open for traffic, amounting to £148,400,000, gives a profit of 1·81 per cent. for the half year, or £3 12s. 4½d. per cent. per annum. Deducting the non-paying dividend lines, the dividend on the remainder amounts to 2·09 per cent. for the half year, or £4 3s. 7½d. per cent. per annum.

After ten years' competition with Railways the dividends received by the Canal Companies between London and Manchester were in 1846 as follows:—

	Per Cent.
Grand Junction Canal	6
Oxford	26
Coventry	25
Old Birmingham	16
Trent and Mersey	30
Duke of Bridgewater's (private property), say	30

The dividends received by the Grand Junction Canal for the last forty years have averaged £9 10s. 9d. per cent. per annum.—*Quarterly Review*, Dec., 1848.

Railway Amalgamation not Monopoly.—No. 112.

Mr. Austin, on behalf of the London and North Western Railway, before a Committee of the House of Commons, in 1848, stated as follows, to obtain a lease of the Scottish Central :—

“ Mr. Adie has admitted that what, for the purposes of this committee, we may term the North Western system, is better and more efficiently worked under its united management than it was while the several companies were disunited. Now, just look at this long line, at present under one management, and break it down into its several portions—the London and Birmingham, the Grand Junction, the Preston and Lancaster, the Lancaster and Carlisle, the Caledonian, the Scottish Central, and the Perth and Northern Lines. This long line is divided into seven separate parts, all harmoniously worked under one management. But dis sever them—let the London and North Western resolve itself into the London and Birmingham and the Grand Junction Companies again—let there be no union between the Preston and Lancaster and the Lancaster and Carlisle—let the Caledonian stand by itself, totally unconnected with its present allies to the South, and what a state of things you will have ! The communication to Scotland will be for every commercial purpose broken up—facilities for communication will no longer exist—the public interests will suffer—disorder will usurp the place of order—and dissatisfaction will prevail among the proprietors. The passenger for the north will meet with an interruption, at Birmingham another, a third at Lancaster, and so on till the end of his journey. Let the committee only consider the delay that will follow. The question scarcely admits of argument. It is manifest, from the evidence of everybody, that you cannot work disunited bits of lines with the same ease and economy that you can work an entire line. And again : this, I contend, is in favour of what I call an equitable railway monopoly. There is no fear of the monopoly which my learned friend Mr. Watson referred to. It is a raw-head-and-bloody-bones, intended only to frighten old women and children. Monopoly in some degree you must, and you will have. The question is, how shall that monopoly be worked with benefit to the companies and advantage to the public ? That is to be done by combining a number of lines forming a continuous route from one point of distance to another point under one management, one head, one set of engineers, engine-drivers, one set of officials from the highest to the least, one staff, one set of engines and waggons, and a general understanding throughout the whole line :—not one set of rules on one part of the system, and another set of rules on another part. A monopoly conducted on this principle will have all the advantages of free trade. Whatever may be your advantages, be they ever so great, under no circumstances, however favourable, can you accommodate the public so conveniently, so satisfactorily, and most certainly not so cheaply, as by this system. This general principle should determine you. Some member of the committee, I know not which, threw out a hint in the earlier part of this case, that this was a case, not of evidence, but of argument. With great deference, I would say that it is not so to the full extent, because the evidence in this case is also important. But the hon. member is right so far ; the real question is one of principle. I am sure you will not allow your minds to be influenced, your decision to be guided by the words ‘ free trade and monopoly.’ Out upon the words ! I treat them with, as I hold them both in, contempt, when they are made the vehicles for disguising facts and arousing prejudices. There ought not—there is not—there cannot be—any competition on Railways. It is a thing that

cannot exist—it is a popular error—a legal fallacy. Competition is a widely different thing, and exists only under very different circumstances. There ought to be no law to interfere between two grocers. They have entered into a commercial speculation, and they must win or lose, as fortune and their own good or bad management wills it. But in the case of Railways, the principle of competition is completely displaced, and I have no doubt that, before many sessions shall have passed, we shall have a law introduced for the purpose of preventing what, in the absence of a better word, I must call private competition in matters of Railways. You must therefore drive what my friend Mr. Watson calls competition—what I pronounce ruin—off the lines, by joining Railways together. I am not afraid to lay down these principles—they are familiar to my mind in the shape of exposition; and I feel and I know that the principle of competition cannot apply in the case of Railways at all.”

London Stock Exchange in 1848.—No. 113.

The abuses of the Share-jobbers became so serious in their results in 1848, that many very severe remarks were made. The following is a sample from the “*Railway Gazette*” of 25th November, 1848 :—

“We attack, and we have attacked, only the notorious abuses of the Stock-market. We point out facts; we expose frauds; we invite inquiry, and invoke justice. Any one who can feel angry at our proceedings, must either have a sympathy for rascals, or have practised the rascality which we have denounced. We say, the men who perverted,—if you will,—the Stock Exchange system of business, so as openly to ‘rig’ bubble schemes, concocted to rob the public, up to bubble premiums, and who received large bribes for so openly rigging the market, ought to be reached by our criminal law, or failing this, to be expelled from the Stock Exchange. But when we see no step taken by the Committee, either to punish notorious delinquents, or to repress a practice that is unblushingly avowed in our courts of justice to exist, then we say that we and the public have a right to conclude, that a system of business which is so dishonest, is not the system of a few, but the general system, sanctioned by the general body. Until we see the public interests properly protected, we shall never cease from warning them against the pitfalls which are contrived for them in the regions of Capel Court.”

Russian Gold Mines.—No. 114.

It appears that, during the ten years ended with 1846, the produce of the mines in the Oural mountains had scarcely shown any difference in the annual supply, while those in Siberia had increased more than tenfold. There has been, during that period, an augmentation of nearly four to one in the total annual produce of these mines. It is expected, from recent discoveries, that the supply will be increased; but it is, of course, uncertain how long it may continue. The value of fine gold obtained in 1837 amounted to £900,673; in 1838, to £1,004,120; in 1839, to £1,003,403; in 1840, to £1,115,037; in 1841, to £1,316,653; in 1842, to £1,848,808; in 1843, to £2,635,386; in 1844, to £2,730,647; in 1845, to £2,792,156; and in 1846, to £3,414,427; making a total produce for the ten years of £18,761,310. —*Herapath's Journal*, February 19th, 1848.

Kingston-upon-Hull.—No. 115.

This port takes the lead as the first in the kingdom for inland trade, while its position with respect to the North Sea has made it the chief outlet of our manufactures to northern Europe, and raised it to the rank of the third port in the country in foreign traffic. The approaches by the deep but intricate channel of the Humber are admirably buoyed and lighted by the Hull Trinity Board; floating docks to the extent of 23 acres already exist, and 15 acres in addition will soon (1846) be opened. The tonnage of the vessels that have paid dock dues during the year amounted to 700,000 tons, and the whole income of the port derived from tolls on shipping and goods borne by shipping exceeds £75,000 a year. The old Hull dock was set on foot 1775, the Humber dock in 1807; more than 20 years elapsed before the Junction dock was opened. Trade has more than kept pace with the increase of accommodation. On one occasion a ship made a voyage to the Baltic and back, while another was ready, but unable to get out of the harbour. Original shares of £250 are now worth £2,000.—*Second Report of Tidal Harbour Commissioners.*

Sir J. Macneill's Opinion of Irish Workmen.—No. 116.

In returning thanks to the guests of the Great Southern and Western Railway, at the opening, on the 1st July, 1848, for the compliment paid him in drinking his health, Sir J. Macneill said:—

“I am quite sure, from the feeling I have seen manifested to-day, that my works have been approved of; and that is the greatest gratification which could be conferred upon me. I am well aware that the works on which we are now engaged are calculated to be of great advantage to the people of Ireland, not merely from the employment afforded by their construction, but the ultimate results which they will certainly produce. At present we find that labourers, after being some weeks in our employment, become able to execute their work with greater rapidity and skill than they ever were before. We find in our contracts, all of which are publicly advertised, that men from England, Scotland, and Ireland, have put in tenders for our works. We have invariably given the contracts for the lowest tender; and I am proud to say, that in nine cases out of ten those tenders have been made by Irishmen. In fact, Irish artisans—carpenters, smiths, and common labourers—have done their work in a most satisfactory and permanent manner. It has been my great object in the construction of these works, to ensure, in the first instance, perfect safety, and I think I have managed to arrive at that end. The Dublin and Drogheda line has now been worked upwards of five years. It has conveyed a great number of passengers during that time, and I am happy to say not a single accident has occurred. The servants of that company are all Irishmen; in this company they are the same to a great extent, and since the opening of the Railway we never had an accident. Our permanent way will not require any repairs for a long period; and owing to a very simple mechanical contrivance, which I was fortunate enough to devise before I came to this country from England, we never had an engine, a carriage, or a truck off the line. The whole of the works, as I before remarked, are carried on by Irishmen, and, being an Irishman myself, I cannot help feeling proud of it. I trust that we shall be enabled to proceed to Cork without any accidents, and that the same friends whom we have now the pleasure of seeing will meet us there next year.”

Coals Exported from each Port.—No. 117.

The following shows the Quantity and Declared Value of Coals, Cinders, and Culm Shipped at each Port, in 1847 and 1848, to the United Kingdom:—

PORTS FROM WHICH SHIPPED.	1847.		1848.	
	COALS, CINDERS, AND CULM.		COALS, CINDERS, AND CULM.	
	Quantities Exported.	Declared Value thereof.	Quantities Exported.	Declared Value thereof.
	Tons.	£	Tons.	£
London	64,433	60,258	81,745	69,362
Rochester	137	100	....	....
Ramsgate	120	57	45	45
Dover	137	229	....	....
Shoreham .....	....	....	55	60
Portsmouth	40	40	137	109
Southampton	972	991	1,740	1,620
Poole	422	418	132	128
Exeter	40	35	5	5
Dartmouth	148	55	175	74
Plymouth	6	5	28	26
Truro .....	....	....	10	5
Penzance .....	....	....	450	261
Scilly	370	157	380	190
Bideford	130	47	5	3
Bristol	7,913	4,359	9,294	5,187
Gloucester	1,569	863	1,885	972
Cardiff	81,032	41,137	117,674	58,444
Newport	116,098	57,683	124,885	62,323
Swansea	46,715	19,529	42,114	18,013
Llanelli	14,178	5,585	15,251	6,372
Milford	439	243	265	245
Chester	280	130	....	....
Liverpool	106,197	60,445	113,554	65,321
Runcorn	630	292	110	39
Lancaster	533	233	820	348
Preston	763	370	647	303
Whitehaven	2,423	1,116	2,914	1,217
Maryport	1,176	507	1,118	413
Carlisle .....	....	....	401	168
Berwick .....	....	....	355	154
Newcastle	1,009,641	379,507	994,299	381,711
Shields .....	....	....	117,162	46,539
Sunderland	476,446	126,661	498,158	136,529
Stockton	134,073	45,864	105,094	36,474
Hartlepool	186,478	50,898	243,060	70,146
Gainsborough	35	18	32	16
Hull	41,741	20,599	46,138	22,751
Goole	2,322	1,048	1,193	536
Grimby	428	214	....	....
Yarmouth .....	....	....	100	78
SCOTLAND.				
Leith	6,478	2,583	15,884	5,570
Borrowstoness	44,148	20,658	57,821	22,174
Grangemouth	7,532	3,357	19,119	6,269
Alloa	12,366	4,693	23,036	6,465
Kirkcaldy	17,843	9,678	29,229	13,208
Dundee	828	458	1,509	583
Arbroath	107	52	40	12

PORTS FROM WHICH SHIPPED.	1847.		1848.	
	COALS, CINDERS, AND CULM.		COALS, CINDERS, AND CULM.	
	Quantities Exported.	Declared Value thereof.	Quantities Exported.	Declared Value thereof.
SCOTLAND,—(continued.)				
Aberdeen	Tons. 165	£ 82	Tons. 639	£ 282
Greenock	24,235	12,907	23,664	11,133
Port Glasgow	6,418	3,441	10,109	4,524
Glasgow	29,470	14,719	27,485	11,732
Irvine	29,501	12,239	48,398	15,453
Ayr	603	272	821	262
IRELAND.				
Dublin	1,236	997	1,937	1,276
Waterford	285	169	23	10
Cork	487	405	1,462	1,189
Limerick .....	....	....	100	60
Sligo .....	....	....	120	45
Londonderry	430	313	421	363
Belfast	2,364	1,656	2,039	1,150
Newry	600	430	465	227
Drogheda .....	....	....	150	100
TOTAL	2,483,161	968,502	2,785,300	1,088,221

Transfer of Capital.—No. 118.

In the case of the English Railways, the transfer of capital, under the head of "Land" alone, has been calculated by Mr. Hudson as 20 per cent., which would amount to £21,305,760 on the £109,528,800, reducing the amount of cost to £88,223,040, and that subject to further reductions. The real operation in England is this: that a given number of persons have ceased to be the receivers or owners of the produce of 35,000 acres of land, but have become the receivers or owners of the produce of £21,305,760 worth of Railway or other stock.—*Brown's Irish Wants and Practical Remedies.*

Manchester Twist Shipped at Yarmouth.—No. 119.

The following remarks appear in the "Railway Chronicle" of 22nd July, 1848:—

"It is wonderful how instantly commerce employs any new channel of communication almost as soon as it is open to it, if it be its interest to do so. Scarcely has Yarmouth become recognised as a port for shipping to Rotterdam, when the exporter of cotton twist sends it thither from the furthest parts of Lancashire for shipment. Not a month has elapsed since this new means of communication with Germany had been advertised, before a freight of cotton twist passed over the Manchester, Sheffield, and Lincolnshire, the Midland, the Syston and Peterborough, the East Anglian and Norfolk lines, to Great Yarmouth, and was shipped thence. We congratulate Mr. Hudson on this evidence of what his management has been able to do for the once despised Eastern Counties—and the fact also proves what the docks at Great Grimsby may fairly expect to obtain of this class of exports when the chain of Railways is completed."

Railways and the Panic of 1847.—No. 120.

At the meeting of the London and North Western Railway, 18th February, 1848, Mr. Glyn remarked as follows:—

"Railway Companies, like other commercial bodies, appeared in the money-market for the purpose of securing the funds requisite for their undertakings. They had engagements to carry out, which they were as much bound to carry out as any other of our great trading companies. They had had powers given to them by Parliament which they must necessarily exercise for that purpose; and I maintain that it is unfounded—that it is no fair allegation—that the evil has arisen from them, if, in common with the Bank of England, in common with the East India Company, in common, in short, with all other large trading bodies, they have appeared as competitors in the money-market to raise their necessary funds. If, gentlemen, any fault is to be found, let it not fall upon the Railway Companies themselves; rather let it fall upon those who, in the course of 1845 and 1846, chose, in legislating, to adopt the principle of competition—chose to force upon the country the necessity of borrowing an immense amount of capital for the formation of new lines—chose to force upon us the necessity of defending our own property, by compelling us to undertake schemes, which, I take upon myself to say, on behalf of the Board, would otherwise never have entered into our imaginations."

Farmers in Lincolnshire.—No. 121.

When Dr. Buckland was visiting the present Lord Yarborough (then Lord Worsley), after seeing the specimens of Wold farming, at a dinner of farmers, his lordship presiding, in the course of an awful pause, the doctor exclaimed, "My lord, the farming here is splendid; but what I want to know is, where do you get your tenants from?" Before Lord Yarborough could answer this puzzling question, a patriarch, from the other end of the table, roared out, "I'll tell you, doctor; his lordship breeds 'em."

Mr. Hudson's Opinion of the Mixed Gauge.—No. 122.

In the House of Commons, on the 22nd June, 1848, Mr. Hudson made the following remarks:—

"He had the honour of presiding over the line referred to, and he wished to give such information as he was in possession of. From a careful consideration of the Mixed Gauge, he was of opinion that upon a long line it would be utterly impossible to work it, from the complication of the points. The short line upon which the experiment had been tried was placed under the superintendence of the engineer of the Midland, whose opinion was, that great dangers arose at the crossings of the points. It was necessary to have a duplicate set of points. The Midland was not at all interested or affected by this line, except so far as the security of the public was concerned. He held in his hand a return made by the engineer of the Midland, by which it appeared that since this line of six miles was formed with the Mixed Gauge, there had been four accidents, which was nearly one accident per mile; whereas, on the remaining portion of the line the average number of accidents was one to seven or eight miles. He felt bound to communicate these facts to the House, being in possession of them."

Mr. Hudson's Opinion of Railway Property in 1848.

No. 123.

At a meeting of the Midland Railway Company, 19th February, 1848, Mr. Hudson remarked :—

"He believed that Railway property would rapidly recover the position it held two years ago. The public had become more discerning, and would be more competent to seek out good lines. Some of the undertakings of 1845 and 1846 might prove to be unremunerating and precarious investments, and they would not find the public ready in future to rush in and patronise any new Railway scheme simply because it was a Railway. The result of this speculation, in the end, might be to their advantage, and might make the property of good solid lines more sought for, more valuable, and more productive. They might then fairly look forward to an improvement in the value of their property; and his advice to them was, 'If you have got a good thing, stand by it.' (Hear, hear.) He trusted there would never be anything to weaken their confidence in the board, and in the property which he and his brother directors represented."

Economy in Railway Management.—No. 124.

At a meeting of the Midland Railway, 19th February, 1848, Mr. Hudson, M.P., said,—

"Nothing was so difficult as to estimate their expenses. The directors had called in before them all the superior officers of the company, of whose ability, honesty, and integrity he could not speak too highly; and, after stating to them that they could not look for a large increase of traffic, and that the results of the present depression would probably be felt for a few months, the directors had drawn their attention to the necessity of exercising a strict economy in all items of expenditure. He could assure them that everything would be done by the directors and their officers to economise the expenditure, always keeping in view the efficient working of their lines (hear, hear), for it would be but bad economy if they did not take care to maintain the same security and the same good management of the line as hitherto. The directors did not wish to carry their economy too far, or that any of their servants should not be fairly and honourably paid for their services."

Counsel and Railways.—No. 125.

A meeting of the Bar took place in the Old Hall, Lincoln's Inn, on the 13th May, 1848, to discuss certain rules adopted by those gentlemen who practise at the Parliamentary bar respecting the payment of fees. The meeting agreed it was not competent for a barrister to refuse a brief solely on the ground of fees previously incurred to another member of the bar remaining unpaid. As a corollary to this, the *Railway Record* asserts that Messrs. Austin and Talbot, and other eminent counsel, have given up all connexion with the Great Western's applications to Parliament. The rumour is, that the leading Parliamentary counsel passed a resolution not to accept, during this session, any briefs from parties in arrear for fees; and that the resolution having been communicated to the Great Western Board, who, under this head, owe (or, at least, owed at the time) some £30,000, the briefs transmitted to these high legal authorities were recalled.—*Railway Chronicle*, 20th May, 1848.

Dishonest Secretary.—No. 126.

May 20.—At the Guildhall Police Court, Mr. Brand, secretary to the (moonshine) Madras and Arcot, was charged with stealing and pawning some articles of wearing apparel left in his charge, the property of Mr. Marriner, the secretary of the North Wales. Sir P. Laurie gave his opinion that the charge of stealing could not be sustained, as Mr. Marriner had entrusted his property to Mr. Brand's care, and he sent the charge of pawning to be dealt with in the district where it occurred.

Tommy Shops.—Railway Contractors and Sub-contractors.

No. 127.

An important decision was pronounced in the Court of Exchequer on the 29th May, 1848, by the Lord Chief Baron, in a case, of which the following are the facts:—S. Aykroyd was a contractor with the Oxford, Worcester, and Wolverhampton, and had engaged one Bugbird and others, as sub-contractors, to make bricks and to do other work for him. The sub-contractors were in the habit of paying their men partly in cash and partly by means of tickets for goods signed by them, and which goods were to be supplied by T. Grimby, who kept a grocer's shop in the neighbourhood. Of these tickets 3,000 had been presented to Mr. Grimby, and goods supplied. On the 17th September the defendant Aykroyd was served with 228 summonses from the Worcester County Court, at the suit of Grimby, in respect of the above-mentioned goods, supplied to as many workmen. The aggregate of the sums claimed amounted to £303 19s, one being for £5, and many for sums less than 20s. Mr. Aykroyd denied his liability to these demands, alleging that he never gave the orders, or authorised any person to give them; or that if he did give them he was not primarily liable, but only as on a guarantee. In this case a prohibition to the Judge of the County Court of Worcestershire was moved for, a rule nisi granted, and cause shown in Hilary Term, the question being whether, on the assumption that Aykroyd was indebted, the County Court had jurisdiction. After reviewing the argument, the Chief Baron now decided that the County Court had no jurisdiction, and a prohibition ought to go.

French Cure for Refractory Engine Drivers.—No. 128.

A speedy and effectual method was adopted by the Mayor of Orleans in bringing some refractory engine-drivers to their senses, during the insurrection in June, 1848. M. Martin, the Mayor, says the *Globe*, having heard that the engine-drivers on the Orleans line refused to bring up the train containing the National Guards who had volunteered to assist in quelling the insurrection in Paris, went to the station, and formally summoned the men to their duty, but they refused acquiescence. He again summoned them, and they again refused. He then called on the National Guards to obey him, saying that he would assume all the responsibility of what he was about to do; and, at the same moment, he made them seize one of the ringleaders, and on the man, in answer to another appeal, again refusing to drive the engine, M. Martin ordered that he should be instantly shot, and he warned the other men that he would treat them in the same way if they persisted in their refusal. Execution was just about to be done, when the men, seeing that M. Martin was really in earnest, offered to resume their duty. It was entirely owing to this energetic act that Paris was enabled to have the assistance of the National Guard on the Orleans line.

Opinions on Early Steam Boats.—No. 129.

In the year 1820, steam boats were first placed on the Forth and Tay. Only a few years previously, the gallant Admiral Sir Philip Durham, who had been in the East India Company's Naval Service, declared, at a meeting of the county of Fife, when the subject of crossing the ferry by steam was discussed, that he had viewed the matter with a seaman's eye, and could tell them that a steam-boat could never live on the Forth. The late Mr. Bruce, of Grangemuir, was of the same opinion. In the same way Dr. Dyonisius Lardner declared, on his reputation and knowledge as a man of science, that a steamer could never cross the Atlantic, and yet soon after found it agreeable to himself to cross the Atlantic by steam, in the face of his own declaration of the impracticability of the feat. Sir Walter Scott, also, after declaring that to talk about lighting the city of Edinburgh from a gas reservoir was downright nonsense, lived to acknowledge that he had delivered a judgment beyond the province of his knowledge.

Wire Fencing.—No. 130.

From the following case, it appears that Wire Fencing is not sufficient for Railways:—

At the Court House, Skipton, 1st July, 1848, in "Re Dale v. North Western," this was an action brought before the Bench to try the sufficiency of the galvanized wire fence, which is being erected on the sides of the North Western, through its entire length. The complainant was Mr. Dale, of Cleatop, near Giggleswick.—D. A. Dale, being sworn, said that the fence was post and wire, the small posts being about three yards from each other, and the main ones about 148 yards. The horizontal wires were about 8 inches apart, and are very elastic. Has had sheep gone through many times, and cows over. The top wire is sufficiently elastic to touch the second wire. If a sheep got in between two wires it would spring until it was 23 inches apart. Gave notice on the 4th of July last of an injury to a cow, which had got entangled in the wires by one hind leg, and was laid up two months in consequence. Estimated the damage at £2. Got no compensation. Considers that no fence will do but post and wood rails, of 4 feet 6 inches high.—Mr. R. Ingleby, of Lawkland Green, said that the line went through his land. Has seen four cows leap over, and has had bullocks fast in the wires. It took six or seven men to relieve them, and they were considerably injured. Had a sheep killed, and two others got fast by the horns. The wires do not break, they only bend. Considers it a foolish fence.—A. Holmes saw a cow in the wire fence near Clapham, and some men had to cut the wires, in order to get her out. She was much cut by the wires.—T. Parker, of Luneside, near Austwick, was the owner of the cow mentioned by the last witness. The farrier who attended her estimated the damages at £3. In March last he had another cow entangled. Many of his cattle have received injury. The fence is not a sufficient one, as cattle will go through and over.—T. Kendal had a horse fast in the wires a year ago. He got paid for the injury it received. It is no sort of a fence.—M. Hutchinson had had a cow fast by the fore leg. A fat heifer was found one morning, which appeared to have been on the top of the fence all night. Had a Scot fast last week. Cattle ran against the fence, and that showed they could not see it.—Mr. J. Proctor, of Long Preston, said that one of his cows got fast in the fence last week, and another cow leaped over it.—Mr. R. Waddilove, of Rilston, said

that he knew the wire fence. It is not a sufficient fence. This is a grazing county, and when cattle see others across the Railway, they go through. It is a dangerous fence.—Mr. J. N. Coulthurst, of Gargrave, said that one of his sheep had been killed in the wires, and another had died after being injured with them. Has seen some sheep fast, and others go over. Has seen lambs and Scotch sheep go through. His greyhounds ran through, and were cut to pieces. Has a similar fence on his own grounds, and dare not put horses there.—Mr. R. Heells, agent to the Earl of Thanet, said that his attention had been directed to this fence on the Earl's property. Considers it no fence, and has given notice to the Company that it is insufficient.—Mr. J. Watson, the engineer to the Company, said that, during the construction of Railway works, it was not possible to make a sufficient fence.—Mr. F. Morton, the patentee of the galvanized wire fence, stated that he was employed to put it up on this Railway. He also put it up on the Chester and Holyhead, Liverpool and Ormskirk, Caledonian, Ayrshire, Chester and Shrewsbury lines, &c. On the Southampton and Dorset line a sample fence was set up, and the Company of Woods and Forests reported it. Has had complaints of the fence in fox-hunting districts. 400 landholders in Scotland have this fence.—The magistrates eventually decided that it was not a sufficient fence, and the order of the Court was, that a wood fence of 4 feet 6 inches high, and five bars, 6 inches apart, be erected by the Company, and completed within a month. This decision will be seriously felt by the Company, as it is understood they have provided materials for fencing the whole of their line. It is estimated that their loss in consequence will not be less than £3,000 or £10,000.

Advantage of having Rails to Docks.—No. 131.

In the hands of a Railway Company bones and many other matters would be moved from the ship to the warehouse direct, and, not unfrequently, under an arrangement with the importer, from ships to trucks, which, without halt, would convey the whole cargo direct to some inland depôt, at a saving, which may be calculated from the fact that the cost of carting a puncheon of rum from St. Katharine's exceeds the whole freight from London to Rotterdam. A grocer, before the Committee on the Lincolnshire Railways, proved that it was cheaper to send a hogshead of sugar from the London Docks by sea, round to Gainsborough, and thence to Sheffield, than to cart it to the Camden Town Station on the North Western.—*Railways and Agriculture in Lincolnshire.*

Agricultural Meetings produce Passengers.—No. 132.

We learn from the *Agricultural Gazette* that in one day no less than 27,500 strangers were present at the Agricultural Meeting at York, in 1848. We may well conceive so vast a number of visitors must have contributed largely to the receipts of the Railways; and we find, on referring to our traffic table, that the York and Newcastle received £2,651 more than on the previous week, and the York and North Midland £3,828 more, together £6,479; besides, the returns last week following the meeting were greater by at least £2,000; thus giving to these companies (which, being under Mr. Hudson's management, may be assumed as almost one in interest) the sum of £8,500 for the occasion.

Coals Exported to each Country.—No. 133.

The following Statement shows the Quantity and Declared Value of Coals Exported to each Foreign Country and British Settlement Abroad, from the several Ports of England, Scotland, and Ireland, during the Years 1847 and 1848 :—

COUNTRIES TO WHICH EXPORTED.	1847.		1848.	
	COALS, CINDERS, AND CULM.		COALS, CINDERS, AND CULM.	
	Quantities Exported.	Declared Value thereof.	Quantities Exported.	Declared Value thereof.
	Tons.	£	Tons.	£
Russia.....	108,378	38,986	197,801	71,525
Sweden	26,589	8,828	48,500	15,044
Norway	32,753	11,577	47,369	14,947
Denmark.....	159,604	50,657	198,427	61,160
Prussia	168,972	52,206	168,268	54,432
Mecklenburg	14,820	4,175	11,180	2,880
Hanover	12,831	4,505	9,231	2,974
Oldenburg	7,375	2,685	6,059	2,022
Hanseatic Towns	241,705	74,442	286,690	91,058
Holland	142,646	49,537	145,349	49,019
Belgium	848	330	1,412	553
Channel Islands.....	53,052	22,591	62,294	27,117
France.....	641,010	217,526	565,956	197,458
Portugal, the Azores, and Madeira	38,066	16,941	39,710	15,554
Spain and the Canaries	97,509	47,161	109,885	52,735
Gibraltar	19,021	8,343	16,369	7,354
Italy.....	103,681	46,361	151,466	66,425
Malta	46,900	20,283	77,026	33,807
Ionian Islands	7,245	2,854	10,488	4,145
Kingdom of Greece	9,843	3,917	5,575	2,222
Turkey	52,258	22,405	57,026	25,176
Wallachia and Moldavia.....	4,160	1,785	4,679	2,194
Syria and Palestine	267	129	1,822	642
Egypt	80,231	13,386	38,837	15,931
Tunis	1,646	697	572	244
Algeria	19,798	7,404	19,816	7,921
Morocco .....	.....	.....	377	189
Western Coast of Africa	8,426	3,828	11,539	5,584
Eastern Coast of Africa	44	35	.....	.....
Cape of Good Hope	10,018	4,965	17,497	10,196
African Ports on the Red Sea.....	1,495	505	1,468	590
Cape Verde Islands	280	140	100	30
Ascension	1,987	1,026	3,218	1,662
St. Helena	235	219	856	779
Mauritius	1,055	578	3,264	2,093
Aden	21,182	10,376	19,047	10,995
Persia	150	150	30	35
British Territories in the East Indies	73,682	46,064	51,778	30,463
Java.....	591	349	618	228
Philippine Islands.....	4,542	2,128	80	40
Bintang .....	.....	.....	790	350
China	7,537	4,637	5,626	3,930
British Settlements in Australia ..	1,135	792	5,089	3,217
South Sea Islands.....	342	145	125	63
British North American Colonies ..	79,033	36,109	80,785	34,467
British West Indies	89,058	52,635	92,446	53,553
Foreign West Indies.....	35,814	17,897	53,137	25,424

COUNTRIES TO WHICH EXPORTED.	1847.		1848.	
	COALS, CINDERS, AND CULM.		COALS, CINDERS, AND CULM.	
	Quantities Exported.	Declared Value thereof.	Quantities Exported.	Declared Value thereof.
	Tons.	£	Tons.	£
Hayti	137	73	.....	.....
United States of America	46,188	27,045	57,608	32,086
Mexico .....	.....	.....	60	36
New Granada	108	65	1,583	982
Ecuador .....	.....	.....	40	20
Brazil	40,483	19,789	51,677	23,130
Oriental Republic of the Uruguay..	3,526	1,957	6,234	2,786
Buenos Ayres	1,385	852	3,046	1,602
Chili	9,680	4,510	24,094	12,134
Peru	4,320	1,979	11,381	7,018
TOTAL	2,483,161	968,502	2,785,300	1,088,221

Bridge Destroyed by Fire.—No. 134.

South Wales (Newport), May 31st, 1848.—The new bridge which crosses the Usk, built of wood, and being about 400 yards long, has been completely destroyed by fire, even to the water's edge. At 6 p.m. the workmen engaged in completing the central arch, which was on an immense pile, consisting of several tons weight of timber and iron bolts, were busy at work, driving in the bolts, when one man used a bolt which had been heated to an extraordinary degree. This immediately ignited the adjoining timber, which, being highly kyanized, or "pickled," was as ignitable as gunpowder. The man had a bucket of water at hand, as was always usual, but it was useless, for the flames leaped along on each side from the centre to each end of the bridge, and the whole extent was instantly in a terrible blaze. The men with difficulty escaped with their lives. A team of trains was passing at the time, and the horses, put to their utmost gallop, were obliged to dash through the flames to escape. The whole town rushed to the great stone bridge adjacent, and hundreds of navvies, carpenters, masons, labourers, tradesmen and gentlemen, were quickly on the spot, but it was of no avail. The town fire-engines were brought, but acted with no effect on the awful flames bursting from the surface of the piles, the rails, the arches, and, in fact, wherever the fire could lay hold of wood to burn. The timber work was so enormous that it took a considerable time to burn any portion wholly away, while the patent composition used to preserve the wood lent assistance to the flames, which rose up with blue and black smoke, filling all the heavens. At about 9 p.m. the ponderous work of the central arch gave way with a terrible crash, and, soon after this, portion after portion fell, until, with the exception of here and there a solitary black and charred fragment, with some portion on the banks, the whole of this magnificent work was totally destroyed. The river was black with burning wood, and the banks became strewn with enormous pieces of half-burnt wood, like the coast after a wreck. The engine from the barracks did great execution, worked by two companies of soldiers, under the command of officers, and the town engines did all they could, but it was a physical impossibility to save even a fragment; we might as well suppose a portion of a barrel of gunpowder could be found after the ignition of the barrel.

The bridge was almost completed when this unfortunate calamity occurred. It had been built of kyanized timber by the eminent contractors, Messrs. Rennie, Logan, and Co., and cost upwards of £20,000 in the erection.—Mr. Brunel is reported to have determined, after a survey of the ruins, on the re-construction in timber of the late bridge over the Usk, which was destroyed by fire. Appliances will, however, be adopted to obviate the inflammability of the material. The expense of rebuilding will not be so great as was originally apprehended, as the abutments on both sides of the river and the piles for the foundations of the piers, which formed the most expensive portion of the original cost, will be available for the new superstructure.

Travelling by Railway.—No. 135.

Few persons are aware of the onerous duties of a Goods Manager on a Railway; in addition to a heavy duty at home, he is continually called from home, and has to travel night and day, and very often without an opportunity of getting either sleep or food at the proper time. Some idea of his travelling may be formed from the following actual work done in April, 1849, by my friend Mr. B. Poole, of Liverpool, during one week:—

	Miles.
Monday, 23rd .. Liverpool to Manchester	32
Manchester to Liverpool	32
Liverpool to London	200— 264
Tuesday, 24th.. London to Liverpool	200— 200
Wednesday, 25th Liverpool to Chester	16
Chester to Crewe	21
Crewe to Liverpool	44— 81
Thursday, 26th.. Liverpool to Carlisle	128
Carlisle to Glasgow	104— 232
Friday, 27th Glasgow to Stirling	33
Stirling to Perth	33
Perth to Forfar	33
Forfar to Montrose	20— 119
Saturday, 28th .. Montrose to Brechin	10
Brechin to Arbroath	20
Arbroath to Dundee	37
Dundee to Liverpool	298— 365
Travelling at Termini	63
	<hr/> 1,324

Coals Pilfered by Water Conveyance.—No. 136.

At a meeting of the East Anglian Railway, 16th February, 1848, the chairman (Mr. H. C. Lacey) said:—

“The company were empowered to charge one penny per ton per mile for the carriage of coal, inclusive of trucks and motive power, but exclusive of loading and unloading. Coal was subject to loss by pilferage of something like five per cent. on the navigations, which would cause it to be carried on the Railway in preference.”

Coals received in Manchester.—No. 187.

The following gives the quantity of Coals received in Manchester by all conveyances:—

In the year 1834.....	737,008 tons.
„ 1836.....	913,991 „
„ 1840.....	1,034,090 „
„ 1847.....	954,719 „
„ 1848.....	1,010,383 „

Railway Competition sanctioned by Parliament.—No. 138.

On the 18th February, 1848, Mr. Glyn, at a meeting of the London and North Western Railway, made the following remarks :

“ I say deliberately, that if Parliament continues to encourage the doctrine of competition as it has hitherto been inclined to do, I do not hesitate to say before you all, that I for one must, in that case, consider Railway property as an uncertain and an inconvenient tenure—a tenure which no man would desire his family or his widow should hold. But if the present Parliament shall return to that system which Lord Dalhousie so strongly recommended—if, instead of trying to destroy each other's interests, Railway companies can be brought to unite—if, instead of encouraging competition, Parliament will impose upon all Railway companies a proper system of fares and charges, so as to secure the public welfare, and will give to existing interests that right which, I maintain, they are entitled to claim at the hands of the legislature, viz., protection for the money they have laid out—in that case, I do not hesitate to say the old existing lines of Railway, and this line in particular, will continue to be, under all circumstances, a safe and sound investment for those who choose to entrust their capital to our control.”

And Mr. Slaney, M.P., remarked:—

“ The competition to which the hon. chairman had adverted was of the deepest consequence, not only to this company, but also to all Railway companies, and, he might add, to the public also. The chairman had very truly stated that if Parliament, instead of looking favorably on what was called competition, had come to some arrangement such as was recommended by Lord Dalhousie, the result to all parties would have been most beneficial. He had given considerable attention to the results of competition in gas companies and water companies, and he was satisfied that the public would be served much better under some judicious arrangement made by Parliament, than when reckless competition was encouraged. This competition had only put money into the pockets of the lawyers, and, in the end, it was charged upon the public. A judicious superintendence would, while it guarded against the evils of an unrestricted monopoly, prevent at the same time a reckless and ruinous competition.”

Proprietors only can attend Railway Meetings.—No. 189.

On Saturday, 12th June, 1847, Mr. George Delianson Clarke was brought before the Lord Mayor, charged with an assault, in attempting to force his way into a private meeting of the Dendre Valley Railway Company. Mr. Clarke attempted to justify himself by producing a letter from a shareholder, requesting him to attend. The Lord Mayor and Sir Chapman Marshall decided that he had no right to attempt entering the room by force, and fined him 5s. for the assault.

**Mr. Hudson's Opinion of an Amalgamation between the
Midland and London and North Western Railways.**

No. 140.

At a meeting of the Midland Railway Company, 19th February, 1848, the following remarks were made:—

Mr. IRONSIDE.—“I have always contemplated that an amalgamation would take place between the London and North Western and the Midland Railways; but I have seen it stated that the former company were in negotiation with the Lancashire and Yorkshire Railway.”

The CHAIRMAN.—“It is not true. I am afraid you must believe only half you hear.”

And at a special meeting held the same day, Mr. Hudson, M.P., said:—

“An observation had been made by a proprietor respecting a probable amalgamation of that company with the London and North Western Company. He did not think it would be wise to go to that company with such a proposal. The proprietors of the Midland Railway had as much under their hands as one department could well manage, and he did not think it likely that any further amalgamation would take place with any other company. There was a point beyond which it would not be prudent to push amalgamations, and he believed they had now arrived at it.”

Closing of Capital Accounts.—No. 141.

On the 18th February, 1848, Mr. Glyn made the following remarks:—

“I would gladly have closed (and my honourable colleagues concurred with me in that respect), if it were possible, the capital account. It is perfectly easy for a Canal Company or a Dock Company to close their capital account. They buy their land, they finish their works, they seek for trade—and there is, in fact, an end of their capital account at once; but our case is as different from theirs as circumstances can possibly make it. I remember perfectly well, that at the commencement of this undertaking, under the advice of Mr. R. Stephenson, we purchased of Lord Southampton 22 acres at Camden Town; and an admirable purchase it was. I remember, however, in my ignorance, inquiring, at the moment, of Mr. Stephenson, why he thought it necessary to buy such an extraordinary quantity of land. To that question he made this reply, which has been impressed on my mind ever since:—‘Mark me, Mr. Glyn,’ said he, ‘you require it all; but, if you did not require it, the value of property in that neighbourhood will be so much enhanced, that you would still be able to part with it to advantage.’ Now, what has been the result? We then contemplated to make Camden Town not only our Goods’ Station and the site of our Locomotive Engine Station for London, but also our Passenger Station. What do we find now? We have removed our Passenger Station down to Euston, and the 22 acres have been found quite insufficient for the purposes of the goods’ traffic, and the locomotive necessities of London. We have been obliged to purchase additional land there several times. What have we done at Euston? We made there what we thought a sufficient purchase from the Duke of Bedford; but since then we have been obliged to buy streets—streets, gentlemen—to give to the public the accommodation they require.

And now I tell you that, when these buildings are finished—buildings which, I assure you, are erected without a single ornament, and without the slightest unnecessary expense—when everything is done, we shall not have one foot of ground, or one single room more than is necessary at the present moment. The same observation will apply to Wolverton. We have been obliged to double our capital there; we have been obliged to do nearly the same thing at Crewe. At Manchester, too, we have been obliged to make considerable additions—I speak in the presence of Manchester men as to the necessity of these additions. So, too, at Liverpool, we have been compelled, at last, to increase our Station—for, in fact, the Station there was a disgrace to us. In truth, gentlemen, if, at the commencement, we had doubled the area of all our principal Stations, we should have done right; but we do not on that account plead guilty to any charge. None of us knew better; we have only derived experience since the commencement of our line; and the result of that experience is this—that we cannot even now close our capital account. Day after day new requirements are coming upon us for the purposes of our traffic, which is increasing, and will increase; and, so long as that increase goes on, it will be impossible for us, without calling upon you at once for more capital than it would be fair and right to ask of you, to close our outlay with advantage to yourselves.”

Mr. Hudson, M.P., narrowly escaped an Accident.—No. 142.

Mr. Hudson narrowly escaped a very serious accident last Saturday. It appears he was going at a rapid rate in one of the down trains on the North Midland Railway, and the hind wheels and axle of the carriage in which he was came off, and the carriage was dragged for some distance along the road in this state. A writer in the *Times* attributes it to a gossip of Mr. Hudson at Derby, and furious driving afterwards to make up the time lost. A carriage and baggage van behind Mr. Hudson's carriage parted from the train about a quarter of a mile before it pulled up. The van was nearly knocked to pieces.—*Herpath's Journal*, 19th February, 1848.

Rates and Taxes Paid by Railways.—No. 143.

The reduction in dividends during 1847 stimulated directors to diminish expenses, and one serious matter was Rates. On this subject we find Mr. Glyn states, on the 18th February, 1848, as follows :—

“I refer to the immense amount—the growing amount—of the rates and taxes which we are called upon to pay. In the present half year we have been actually paying the sum of £30,000 under this head—being an increase on the corresponding half of the last year of £4,500. We have, I hope, set in motion means by which a reduction may be secured. It is a crying grievance; and, in point of fact, those of you who live in the country, on a line of Railway, know that the county and parochial authorities are in the habit of looking to the Railway, in order to saddle upon the company the greater part of the charges which ought to fall upon the parish. Whether it will be necessary to apply to Parliament on the subject, or whether we shall be able, through the law as it now exists, to obtain redress, I cannot at this moment pretend to say. All I can state is, that it is a subject which has pressed and is pressing upon the attention of all Railway companies; and it cannot fall at last to command a united effort, in some way or other, to remove the evil.”

Railway Directors in an Unpleasant Position in 1848.

No. 144.

When dividends were reduced in 1848, Directors had to submit to very severe remarks from Proprietors. The following is a sample, and was part of the speech made by Mr. Chaplin, M.P., at the meeting of the London and South Western Railway, 17th February, 1848 :—

“You have heard that the shareholders have a want of confidence in the Directors; you have heard of the payment of dividends out of capital; you have heard that we ought to have Auditors; you have been told of what are called the ‘legerdemain tricks’ of the Board—that they were ruining a third part of the proprietary, and, with the Chairman at their head, were securing an undue preference for themselves—in a word, that they were doing everything possible to reduce your property to nothing.”

And at the meeting of the London, Brighton, and South Coast Railway, 14th February, 1848, Mr. Lewis Levy said,—

“It was generally reported that the Directors had purchased the Brighton and Chichester, and Brighton and Hastings lines at 12½ premium, when no one else would have taken them at 5 discount. In reference to this subject, wherever he went it was remarked (though he did not make the charge) that the Directors had ‘put a lot of money into their own pockets’ by this transaction. He did not wish to be subservient to any Railway Directors, but at the same time he was not going to abuse them merely because they were Railway Directors; still, he should like to have a proper account of the purchase of those two lines. At the same time, he was not for doing as people advised him, and turning out their Directors, for they might get worse.”

Government Management of Railways.—No. 145.

At the meeting of the London and North Western Railway, 18th February, 1848, in reply to Mr. W. Harris, who complained of the Directors for not having kept up the dividend, and called upon the Shareholders to assist him in placing at the head of affairs Directors, who would keep up the old rate, and who expressed a most favourable opinion of Lord Monteagle’s Bill, and urged the appointment of Directors who could give their whole time to the management of the Railway, the Chairman said,—

“I confess, gentlemen, that the doctrine which the honourable proprietor has promulgated is, to me, perfectly novel. I never before heard any Railway proprietor get up and advocate Government interference in the way that he has done. All I can say is this—that if Government is to interfere in the way the honourable proprietor proposes, it will then be high time that he and his fellow-proprietors should look out for another set of Directors. It is quite impossible you should suppose those who act, and have acted, with me here—who have from the first been the instruments of carrying the Railway system to its present perfection—it is

impossible, I say, that we should condescend to work under Government superintendence. If it be the meaning of the honourable proprietor altogether to change the constitution of this great commercial Company—if he desires that the lines should be mere Government machines—if he wishes to throw into the hands of Government the whole patronage connected with them—if he wishes those things—let him bring forward the whole question, and let us have it fairly out. For my own part, I never professed to object to Government interference to the same extent as some, because I have thought that some such interference is necessary; but this I say, that if there is to be such Government interference as the honourable proprietor proposes, let him give us ‘notice to quit.’ I should not regret the day that would allow me to sit in my own counting-house in more quiet. He little knows the anxiety, the great anxiety and trouble, connected with this vast undertaking. It has grown with the growth of years; it has become a machine which it is almost impossible for any set of men to manage without assiduous attention, the most unremitting attention, to its working. And when he talks of Directors not giving their whole time to it, does he suppose that therefore the affairs of the Railway are neglected? What is our staff for? I would rather have a paid officer doing duty at the head of an establishment, than unpaid Directors, as we are, even if they gave the whole of their time, undisturbed, to the management of the concern. We happen, gentlemen, to have associated with us some of the most competent Railway officers that were ever collected; and, added to the superintendence of those gentlemen, is that of parties who were the first to originate Railway undertakings in Lancashire—the first to originate Railways in London. I should have thought, and I have heard the sentiment expressed by men whose opinion the whole country values, that all thinking persons would lament the day when such gentlemen as those to whom I have alluded were forced, by any Government interference, to give up the position which they have so voluntarily and cheerfully assumed, and with so many advantages to their proprietors and the public.”

Proprietor's Opinion of a Solicitor.—No. 146.

At the meeting of the London and South Western Railway, 17th February, 1848, the following remarks were made:—

“Mr. Hoyes asked Mr. Bircham, the solicitor, to read a particular clause in the original Act of the Company, reminding him that he was the servant of the Company, and not merely of the Directors. Mr. Bircham began to read, when Mr. Hoyes told him to pause till he (Mr. Hoyes) could find the clause in his own Act; for that, as Mr. Bircham had introduced clandestinely a clause into one Act, he might think proper to omit a clause in reading this one. This imputation was met by loud hissing and cries of ‘Shame, shame!’ whereupon Mr. Bircham said he should decline to read the clause at all, for, though he was their solicitor, he was also a gentleman; and if it were meant to be insinuated that he could be in any way guilty of clandestine introduction of clauses, or falsifying a document which, out of courtesy to the honourable proprietor, he had been willing to read, he repelled the charge in the strongest possible manner. Mr. Baker took occasion to say, that, though opposed to the Directors on several points, he did not countenance these attacks. The meeting evidently strongly felt for Mr. Bircham's position; but it is only right to state that, before sitting down, Mr. Hoyes amply and frankly apologised to that gentleman for his conduct.”

New South Wales Imports.—No. 147.

The Value of Imports into the Colony of New South Wales (including the District of Port Philip), from the Year 1838 to 1847, inclusive.

Year.	From Great Britain.	From British Colonies.		From South Sea Islands.	From Fisheries.	From United States.	From Foreign States.	TOTAL.
		New Zealand.	Elsewhere.					
1838..	£ 1,102,127	£ 53,943	£ 255,975	£ 5,543	£ 71,506	£ 8,066	£ 82,112	£ 1,579,277
1839..	1,231,969	71,709	504,828	3,863	186,212	23,083	194,607	2,236,371
1840..	2,200,305	54,192	376,354	1,348	104,895	24,164	252,331	3,014,189
1841..	1,837,369	45,659	296,637	24,361	97,809	85,232	200,871	2,527,988
1842..	854,774	37,246	280,955	10,020	64,999	20,117	206,948	1,455,059
1843..	1,034,942	15,738	211,291	22,387	42,579	12,041	211,566	1,550,544
1844..	643,419	20,795	133,128	10,624	32,507	17,167	73,600	831,280
1845..	777,112	34,470	203,289	40,048	43,508	7,416	128,016	1,233,854
1846..	1,119,301	23,367	239,576	21,739	56,461	4,459	165,539	1,630,522
1847..	1,347,341	27,159	361,565	6,919	41,557	1,550	196,032	1,952,022

Mr. Creed's Resignation of Secretaryship.—No. 148.

At the meeting of the London and North Western Railway, 11th August, 1848, the Chairman (Mr. Glyn) thus explained Mr. Creed's resignation:—

"A new report had also appeared on the horizon, and one which, had it been true, he confessed would have affected his feelings, as regarded the interest of the undertaking, most materially—he alluded to the report that his honourable friend Mr. Creed was about to relinquish his situation as secretary, because he had had a difference with the Directors respecting the accounts. Were it true that his friend Mr. Creed had any difference with the Directors as to the accounts, he should indeed be suspicious that there was something wrong at bottom. To him they had looked from the first for the management of their accounts, subject to the superintendence and control of the Directors. To his honesty and integrity, as regarded these accounts, he, the Chairman, implicitly pinned his faith; and he need not add that to that honesty and integrity the Proprietors might implicitly pin theirs. His honourable friend Mr. Creed did intimate to the Board that he had reached that period of life when it would be pleasanter to him to be relieved in some degree from the cares and responsibilities of office; and no one responded to the request more readily than the Directors. When they did, however, respond to it, that they would prefer themselves being the judges of the time when it seemed best for the Company and the interests of the Proprietors that such retirement, if any, should take place, there was annexed to that reply the condition that, as long as life and health were spared to him, he at least would not decline his aid in the conduct of their affairs; and the Directors, by their unanimous voice, in order to secure his co-operation, placed at his disposal the first vacancy that might occur in the Direction."

French Railways.—No. 149.

It may be well to record the conditions proposed on the 16th May, 1848, by the Minister of Finance to the National Assembly of France, for the assumption of the Railways by the State:—

"1. The resumption by the State of the Railways conceded to financial committees previous to the 24th of February, 1848, is declared a measure of public utility. 2. The Minister of Finance is authorised to execute the measure, on allowing the compensation stipulated in the third article. 3. The resumption of the different Railways shall take place on the following terms:—*First Category*—The Paris and St. Germain, the two Versailles roads, Strasburg to Basle, Paris to Orleans and Corbeil, Paris to Rouen, Rouen to Havre, Montereau to Troyes, Paris to the frontier of Belgium with the branches, Orleans to Bordeaux, the Centre line, Avignon to Marseilles, Amiens to Boulogne, Paris to Lyons, Paris to Strasburg, and Tours to Nantes. The value of those different lines shall be fixed according to the average price of their respective shares on the Paris Bourse during the six months that preceded the revolution of the 24th of February (from the 24th of August, 1847, to the 24th of February, 1848). In exchange for the shares the holders shall receive coupons of Rentes 5 per cent., price for price, according to the average price of the Paris Bourse during the six months above-mentioned.—*Second Category*—The Andrezieux and Roanne road, Lyons to St. Etienne, Grande

Combe to Alais and Beaucaire, Abscon and Anzin to Denain and Somain, Montpellier to Cette, Mulhouse to Thann, Bordeaux to La Teste, Dieppe and Rouen. For this second category, the Minister of Finance is authorised to treat with each Company separately; the treaties shall, however, be submitted to the sanction of the National Assembly. 4. The Companies with which the Minister of Finance should think proper to enter into a negotiation may, in a general Assembly of the shareholders, assembled for the purpose, accept by a majority of votes the conditions proposed by the Minister of Finance, and thus contract for the universality of their shareholders. 5. A sum of Rentes equal to the estimated value of the Railways redeemed shall be inscribed on the Grand Book of the Public Debt. 6. The State, assuming the place of the Companies, shall reimburse their obligations and loans on the terms stipulated with the lenders. 7. The expenses necessary for the execution by the State of the Railways which were to be executed by the Companies in virtue of anterior laws, shall be provisionally defrayed by the floating debt. 8. The Minister of Finance and the Minister of Public Works are charged with the execution of the present decree."

And the following Table shows the prices of the Railways during the period referred to:—

	Paid upon each £20 share.	Price during six months preceding February 24th.		Average.	Present price.
		Highest.	Lowest.		
Boulogne and Amiens	20	15½	12½	14½	6½
Orleans and Bordeaux	6	6	3	4½	1½
Paris and Orleans	20	48	44	46	22½
Paris and Rouen	20	37	33	35	15½
Paris and Strasburg	8	5	2½	3½	2
Rouen and Havre	20	23½	16	19½	7½
Strasburg and Bâle	14	6	6	6	..
Tours and Nantes	8	4½	2	3½	1½
5 per cent. Rentes .....	..	118½	113½	115½	69½

Railway Pic-nics.—No. 150.

Mr. Punch, who is a large Railway shareholder, is beginning to feel sensibly alive to the efforts made in all quarters to sustain the dividends. His last remarks are on Railway Pic-nics. The grand object of Railway Directors is to get a dividend; and the maxim applicable to this process is, "Get a dividend—honestly if you can—but—get a dividend!" Among the various artifices lately resorted to for the purpose of swelling the coffers of the various Companies, is the happy idea of Railway Pic-nics, which are becoming exceedingly popular. A few days ago the station of the Eastern Counties, at Shoreditch, was alive with all the resources that beauty can derive from millinery; for a party of light-hearted houis, in stiff muslins of every degree—from the broad-skirted book to the jaunty jaeonot—had thronged the platform for the purposes of pleasure. The ample *visite* hung upon the sloping shoulders of youthful grade, and the newly-imported *palalla*—manufactured of every material, from the rich brocade to the paltry

persian or the seedy sarinet—gave life and vigour to the station. We were at first puzzled to make out the meaning of this group, assembled among porters and packages, luggage and luggage vans, passengers and paper vendors, until upon inquiry we ascertained that a pic-nic party was going off by the Railway, with sandwiches stowed away in the stuffing-box of the engine, hot water for tea in the boiler, hard eggs deposited in the cylinder, and some champagne, placed for security in the safety-valve. Nothing could be more complete than all the arrangements, and when the tender started, with pleasure in its train, the sight was a truly refreshing one. The pic-nic came off, we believe, at one of the lowest goods stations of the Eastern Counties, and the estates were set out upon one of those revolving pieces of machinery upon which the carriages are turned round, and which, acting as a sort of dumb waiter, caused the wine to circulate with the utmost facility. There was a constant succession of hot tea from the boilers of the trains passing up and down the line, and the festivities were kept up with great spirit till a late hour. One of the locomotives was kept constantly supplied with the pure element, to act as a great moral engine for the advancement of temperance principles among such as were inclined to follow them.—*Railway Chronicle*, 12th August, 1848.

Economy in Railway Management.—No. 151.

At a meeting of the Manchester, Sheffield, and Lincolnshire Railway, 9th August, 1848, the chairman, the Earl of Yarborough, stated, in reply to Mr. Simpson,—

“It was only an act of justice to Mr. Meadows to say, on the part of the Directors, that they had quite as much confidence in him as the shareholders could have. As to the future management, he could assure them that they should not lose sight of the important question of economy. Whether the arrangements which might be necessary would involve any increase of expense, he could not tell, because they had not completed their arrangements; but he might say that the Directors had come to the conclusion that the affairs could be as well managed by twelve Directors as by eighteen, and that considerable economy would result from that reduction. He mentioned this to show that they were anxious to economise; but he should deceive them if he did not add, that they must not so economise as to have bad management. *That* would be a very false economy.”

Yorkshiremen Outdone.—No. 152.

On the 11th August, 1848, the following remarks were made at a meeting of the London and North Western Railway :—

Mr. MOORE gave the Directors credit for their arrangement with the Leeds, Dewsbury, and Manchester, in which they had evidently got to the windward of the Yorkshire Directors. The Leeds Company's portion of the 7 per cent. would be about £4 18s., and it produced to the London and North Western 10 per cent. The line itself, moreover, went through a complete beehive of industry.

The CHAIRMAN thought the only thing remarkable about the matter was the fact of the London Directors getting the better of gentlemen in Yorkshire. In other respects, the bargain was an eligible one.

Oldest Railway in Scotland.—No. 153.

A few words on one of the oldest lines in Scotland may not be without interest. The Edinburgh, Leith, and Newhaven, as it was then called, was projected in 1834-5, and sanctioned by the legislature in 1836. The estimated cost of construction was set down at £100,000 for about 3 miles of Railway, single line, and the promised annual dividend was 15 per cent. Very soon after the Act was obtained, it was found that the estimates were utterly fallacious, and that the engineering difficulties of the Leith branch were insurmountable. No active steps were, in consequence, taken to carry out the work until 1839, when a new company took up the scheme, and obtained a bill to abandon the original plans, and in lieu thereof construct the existing line, namely, from Princes-street (where it now joins the Edinburgh and Glasgow and North British lines), passing through a very narrow and steep tunnel, which terminates in Scotland-street, to Trinity Pier, Newhaven—a length of 2 miles and 138 yards, with branches—on the right hand to Leith, 1 mile and 500 yards in length; and on the left to Granton, 1,551 yards in length, forming a total mileage of 4½, constructed at a cost of £310,000; being for Parliamentary expenses, £10,913; land, £31,606; engineering, £7,534; works, £175,480; general charges, £22,127; and plant (for animal traction), £12,530. The tunnel is 1,000 yards in length, and is 90 feet below the surface of the streets. The incline falls at the rate of 1 in 27·45; the same gradient as on the Surrey side of London Bridge.

Until May last year this little line was worked by horses, starting from Scotland-street, the tunnel not having been completed till about the middle of that month; when a stationary engine, constructed by the Messrs. Hawthorne, of Newcastle, was erected, and now works the trains through the tunnel.

Although the Granton is one of the oldest Scottish lines, it has never remunerated its proprietors. Previous to 1846 the average annual number of passengers was only 110,000; and the very unsatisfactory result was, that the expenses rather exceeded the receipts; but in 1846 matters began to improve, and the number of passengers increased to 322,166 in that year; the receipts from which amounted to £4,010, derived from fares of 2d. per mile, and from trains running every quarter of an hour from 7 a.m. till 9 p.m. The passenger traffic of this little district is large throughout the year, and immensely so in the summer months; but the greater part remained with the omnibuses—spiritedly and cheaply conducted—until of late. It would therefore seem that animal power on the rail could not contend with animal power on the road. No doubt the omnibuses had the advantage of bringing the passengers into the very centre of the town, while the Railway station was a little distance off; but we should suppose that had cheap fares been charged, combined with the great number of trains which were run, the relative proportions of the receipts and disbursements would have been materially altered.—*Railway Chronicle*, 20th May, 1848.

Telegraph allays Anxiety.—No. 154.

On the occasion of his visit to the York Agricultural Meeting, in 1848, Prince Albert left the Euston Station at 9 a.m., and performed the whole distance (228 miles) at the rate of 40 miles an hour. In ten minutes after His Royal Highness had reached the archiepiscopal city of the north, and at 2 50 p.m. Her Majesty received information in London, by means of the electric telegraph, that the journey had been safely accomplished.

Gold produced in Russia, from 1837 to 1846.—No. 155.

The following is a Return of the Quantity of Gold produced in the Dominions of the Emperor of Russia, in each of the Ten Years ended with 1846, its Value in Pounds Sterling; and the per centage amount of Duty levied thereon by the Russian Government. Also an Account of the Progress and Prospect of such Production, brought up to the latest period.

Years.	IN THE OURAL.				IN SIBERIA.				RETURN OF PRODUCE AND VALUE STERLING..				QUANTITY AND VALUE OF FINE GOLD.				Duty levied by the Russian Government.	
	Public Mines.		Private Mines.		Public Mines.		Private Mines.		Annual Progress compared with 1837.		Total.		Russian Weight.		British Troy Weight.			Value at the rate of 118'00 Grains Troy Weight per Pound Sterling.
	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Total.	Annual Progress compared with 1837.	Total.	Pounds.	Pounds.	Pounds.	Pounds.			
1837..	131 00	178 53	309 53	1 00	26 05	106 92	132 97	1 00	412 50	1 00	412 50	402 98	17 669 60	900 673	From 12 to 21 per cent. on the produce of the private mines; the rate being subject to no rule, but varying according to localities and other circumstances			
1838..	131 87	168 30	300 17	0 97	27 95	165 21	133 16	1 45	493 33	1 12	493 33	448 93	19 639 06	1 004 120				
1839..	140 06	169 73	309 78	1 00	23 74	159 46	183 20	1 38	492 98	1 12	492 98	448 61	19 685 00	1 003 403				
1840..	134 12	164 29	298 41	0 96	32 84	216 57	249 51	1 87	547 82	1 24	547 82	498 52	21 875 06	1 115 037				
1841..	131 48	165 00	296 48	0 95	29 07	321 32	350 39	2 63	646 87	1 46	646 87	568 66	25 830 40	1 316 653				
1842..	130 30	162 10	292 40	0 94	37 82	578 11	615 93	4 63	908 33	2 05	908 33	826 58	36 270 33	1 848 808				
1843..	137 70	176 08	313 78	1 01	No Return.	981 00	981 00	7 37	1 294 78	2 93	1 294 78	1 178 26	51 701 61	2 635 386				
1844..	136 48	173 58	310 06	1 00	Public & Private ditto.	1 031 52	981 00	7 75	1 341 58	3 03	1 341 58	1 220 84	53 570 46	2 730 647				
1845..	130 40	197 60	328 00	1 06	58 03	1 304 85	1 043 80	7 85	1 371 80	3 10	1 371 80	1 248 34	54 777 16	2 792 156				
1846..	129 58	185 07	314 65	1 02			1 362 88	10 25	1 677 53	3 80	1 677 53	1 526 55	66 985 01	3 414 427				
									Total.		Total.	8 387 96	368 063 69	18 761 310				

ACCOUNT OF PROGRESS AND PROSPECT.

Progress, during the ten years ended with 1846. The Return of produce shows—1st. That there has been scarcely any difference in the supply from the Oural. 2nd. That the produce of Siberia has increased more than ten-fold. 3rd. That there has been an augmentation of nearly four to one in the total annual supply.

Prospect.—It is said that new mines have been discovered in the Oural; and the fact of an Imperial Ordinance having lately forbidden the sale of public estates in the region of the Auriferous Sands of Siberia, justifies the inference that the Government have made successful surveys in that direction, and anticipate a further profitable development of the gold washings which have been so fruitful during the last four years. Under these circumstances it would seem reasonable to expect an increase of supply, of which, however, it is quite impossible to estimate either the proportion or the continuance.

Engine sunk in a Moss.—No. 156.

On the Caledonian Railway, May 23rd, 1848, the down train which should have left Carlisle at 6 20 p.m. was delayed on its way from London to Carlisle, and did not reach the latter place until upwards of half an hour after the time set down for it. The train, consisting of an engine and two carriages, then left Carlisle at 7 3 p.m. and proceeded at a rapid rate, in order to make up lost time. Having reached Covenshaw Bog, near Carnwath (about 26 miles from Edinburgh), the coupling chain which attaches the tender to the train gave way, when the engine, liberated from its burden, got off the rails, and, after running about a hundred yards on the soft ground, penetrated the moss to the depth of about 16 feet. The engine-driver, stoker, and guard, were all killed. The train was overturned; but none of the passengers were hurt, except one lady and a gentleman. The lady had her hand and face bruised, but not seriously.

Gauge Struggle in 1848.—No. 157.

The "Railway Chronicle," 27th May, 1848, says,—

It seems to us that the North Western Company and other narrow-gauge interests in the North have been asleep; while the broad gauge have, with their wonted energy and unity of purpose, stolen a march on the aristocrats of the narrow gauge, who it appears to us are continually fighting their narrow gauge question in the narrowest field, with the narrowest views, and therefore in the least successful manner. Certainly if good fighting made a cause good, the Great Western would bear the palm away from the North Western beyond all controversy.

Carriers on Railways.—No. 158.

On the 1st June, 1847, the London and North Western Railway Company partially took the carrying business into their own hands. On this subject the Directors' Report to the Proprietors, at the meeting held 18th February, 1848, states,—

The Proprietors are aware that in the Merchandise Department the Directors have carried into effect on the Southern Division of the line that system of operations which for a long time has been the prevailing policy in the North, of employing no intermediate agent between the Company and the public, in fact, of being themselves the carriers on their own line. The Directors, up to present time, have every reason to be satisfied with the result, and they attribute the favourable position of this branch of their business, in part, at least, improved system of working—a system which has been introduced under many disadvantages, and certainly at an unfavourable season in reference to the recent monetary and commercial crisis.

And the Chairman (Mr. Glyn, M.P.,) remarked,—

The total increase in the traffic during the last half year was £38,000. That increase has been principally derived from the coal and goods traffic; and I take this opportunity of stating, for the information of all, that the new system upon which we are now carrying on the goods traffic has fully answered our

expectations in its results. Of course there were, at the commencement, considerable difficulties; and I am perfectly aware that the service of the public was not accomplished with that efficiency and regularity that we could wish. I hope, however, that every succeeding day will bring us nearer to a more perfect state of things.

At a meeting of the Midland Railway, 19th February, 1848, Mr. Hudson, M.P., said,—

With regard to the goods traffic many complaints were made when the Company first undertook the carrying of goods, but those complaints had almost entirely ceased, and the goods traffic had now considerably increased.

And at a meeting of the South Western Railway, 25th August, 1848, Mr. Locke, M.P., said,—

They adopted in their carrying of goods the system that had been found to answer so well, and which from the first he had advocated on the Grand Junction, that of the Company doing its own business.

The Report of the Investigation Committee to the Proprietors of the South Eastern Railway, dated 14th May, 1849, states,—

The Directors acted judiciously, and with great advantage to the interests of the Company, when they changed the system which formerly prevailed with respect to the goods traffic, and became their own carriers. Your Committee are, however, of opinion that much yet remains to be done to ensure to the Company the full benefit which they have a right to calculate on from this department; and they urge upon the Directors the necessity of unabated and persevering attention to details which the nature of the traffic renders essential to its successful development. Much will depend on the party who may be appointed to fill the office of manager of goods traffic; and the Directors are specially recommended to secure the services of an officer uniting with general activity and perseverance of character an intimate and practical knowledge of the carrying business.

And again, in a letter from Mr. Ricardo, Chairman of the North Staffordshire Railway, addressed to the Potters in Staffordshire, on the 9th April, 1849, with reference to the Trent and Mersey Canal, it is said,—

The Company undertook the carrying trade on their own account, with the sole view of diminishing the cost of transport to their customers, by securing to them the amount earned by the carriers up to the period when they engaged in the trade. They looked for their whole profit from the tonnages, and they do now carry for no other profit but that which they charged to the carriers, who obtained from the manufacturers their profit upon freight also. If the Company cease to be carriers and diminish their tonnages, the carriers will raise their freights in the same proportion; so that while the profits of the Company would diminish, no advantage would be obtained by the manufacturers.

Thirty years since the Trent and Mersey Canal Company were driven by circumstances, to which it is unnecessary here to refer, to abandon the carrying trade to Shardlow and the adjacent parts, and turned over that branch of their trade with its plant to another Company. The consequence was an immediate

advance of freights to from 30 to 50 per cent.; and to this may in some measure be attributed the loss of the North of England and European trade to the Staffordshire Potteries.

And the Report of the London and North Western Railway Company, read at the meeting held 17th August, 1849, says,—

It is satisfactory to report in the merchandise department an increase of business, amounting to £47,000, which has been obtained at a very trifling augmentation of the working expenses. This large addition of income, in the face of much competition, is an indication of the expanding commerce of the kingdom, and of the soundness of the system on which the carrying business of the Company is now conducted.

For other information on this subject, see *Salt's Facts and Figures*, page 64.

Railway Companies' kindness after Accidents.—No. 159.

The "Railway Chronicle," 27th May, 1848, makes the following remarks:—

In the midst of the circumstances of the late fatal accident on the Great Western, a Mr. Graham, of Russell-place, Fitzroy-square, has come forward to publicly bear testimony, in a letter to the *Morning Herald*, to the unceasing kindness and activity of every person connected with the Company towards the sufferers and their friends, regardless of all expense. "Expresses have been sent to give information, and the relatives of some of the sufferers have been brought from great distances, every cost being borne by the Company. Any person making known a wish to visit a sufferer, has been immediately furnished with a free pass to and fro. I would also do justice to the driver of the engine; he modestly said on the inquest, that our safety was mainly owing to an eight-wheeled engine. I believe that we owe our lives to the skill and presence of mind of the driver, who slackened the speed of the train as gradually as if he had been entering a station; had he lost his presence of mind, and stopped the train too suddenly, the result might have been worse than the first occurrence, fearful as that was."

Railway Meetings not Attended.—No. 160.

The half-yearly meeting of the Killarney Junction Company was advertised for the 15th May, 1848, but a sufficient number of shareholders not having assembled to constitute a legal meeting, no business was transacted. The Report of the Directors, the Statement of Accounts, and the Engineer's Report, have not been issued.

And again:—

The half-yearly meeting of the Portbury Pier proprietors was to have been held at Bristol, on the 2nd September, 1848, but a sufficient number of shareholders not having attended to constitute a meeting, it was adjourned *sine die*.

And in August, 1848,—

The meeting of the Swansea Valley proprietors was adjourned in consequence of a sufficient number of proprietors not having been present.

New South Wales Exports.—No. 161.

Return of the Value of Exports from the Colony of New South Wales (including the District of Port Philip), from the Year 1838 to 1847, inclusive.

Year.	To Great Britain.	From British Colonies.		To South Sea Islands.	To Fisheries.	To United States.	To Foreign States.	TOTAL.
		New Zealand.	Elsewhere.					
1838	£ 583,154	£ 46,924	£ 113,716	£ 7,137	£ 33,988	£ 11,324	£ 6,525	£ 802,708
1839	597,400	95,173	194,684	1,347	34,729	18,568	7,175	948,776
1840	792,494	215,486	304,724	6,621	27,864	27,885	24,618	1,399,692
1841	706,336	114,980	123,968	13,144	18,417	4,837	41,715	1,023,397
1842	685,705	131,784	166,239	3,005	22,862	17,101	40,715	1,067,411
1843	825,885	79,764	205,992	17,934	18,827	....	23,918	1,172,320
1844	854,903	70,799	165,553	14,106	11,623	....	11,131	1,128,115
1845	1,254,881	77,017	199,771	17,656	1,595	....	5,068	1,555,966
1846	1,130,179	106,277	222,645	13,441	590	....	8,407	1,491,539
1847	1,503,091	122,205	212,932	14,231	....	....	17,587	1,870,046

The following will explain the Quantities of the above Imports that were produced in Great Britain and her Colonies, and how much was of Foreign growth:—

IMPORTS.

Year.	Value of Articles the produce or manufacture of the United Kingdom.	Value of Articles the produce or manufacture of other British dominions.	Value of Articles the produce or manufacture of Foreign States.	TOTAL VALUE.
1844	£ 629,510	£ 154,752	£ 147,178	£ 931,200
1845	786,514	156,491	290,849	1,233,854
1846	1,111,238	88,638	430,646	1,630,522
1847	1,269,183	95,118	617,723	1,982,023

And how much of the Exports was produced in the Colony, and how much was of Goods previously imported:—

EXPORTS.

Value of Articles the produce or manufacture of New South Wales.	Value of Articles the produce or manufacture of the United Kingdom.	Value of Articles the produce or manufacture of other British dominions.	Value of Articles the produce or manufacture of Foreign States.	TOTAL VALUE.
£ 864,709	£ 119,197	£ 64,266	£ 79,943	£ 1,128,115
1,269,062	100,901	110,160	75,963	1,555,966
1,201,433	120,424	80,409	79,183	1,381,539
1,649,031	136,385	15,965	68,766	1,870,046

Railways and Docks.—No. 162.

On this subject the "Railway Chronicle," of the 19th August, 1848, thus remarks:—

"Mr. Glyn, at the London and North Western meeting last week, took the opportunity of congratulating the shareholders upon the connexion with the Docks in the Thames, which will very shortly be realised. It is curious to observe how every Railway is trying to have its water terminus. Mr. Hudson connects his Eastern Counties at Yarmouth; his Hull and Selby at Hull; his northern lines at Hartlepool and Sunderland. The Great Western has Bristol, and is looking to Plymouth and Falmouth. The shrewd men of Sheffield were laughed at for seizing hold of dull Great Grimsby; but every day's experience is proving the wise policy of that step. The Lancashire and Yorkshire have secured Goole; the South Western, Southampton, &c.; and we have no doubt that in a few years docks will be a feature of every important line. The possession of a good water terminus is like extending the terminus in one sense to all the world."

London "Times" and Mr. Hudson.—No. 163.

The "Railway Gazette" of the 25th November, 1848, gives the following reasons why the "Times" newspaper rails at Mr. Hudson:

"In the case of the South Western Company, the *Times*, we knew, would bear in grateful recollection, that the Directors do not *always* prosecute scamps whom they detect riding in first-class carriages, and paying only second class fares. In the case of the Eastern Counties and the Midland lines, the *Times* has an old grudge, as well as a new grudge, to wipe off with Mr. Hudson, the chairman of both Companies. The old grudge dates as far back as the establishment of the *Daily News*, a paper that was expected to 'walk into' the circulation of the *Times* pretty considerably when it first appeared, and which did so at first to some extent—a circumstance attributed to no cause more directly than (so runs the report) that Mr. Hudson put the facilities of the Railways under his control too readily at the service of the new rival paper. Everybody recollects the personal and illiberal attacks which appeared on Mr. Hudson in the *Times*, about the period to which we refer, but everybody does not know the impelling cause. So much for the old grudge; now for the new. Mr. Hudson has dealt a mortal blow to the band of Railway brigands who had confederated to destroy public confidence in Railway property. In a recent reply to a communication from certain share-jobbers (a class of persons in intimate alliance with one peculiar department of the *Times*) calling upon him to correct certain alleged Railway abuses, which had, as was hypothetically assumed, tended to depreciate Railway property below its value, Mr. Hudson, without beating about the bush, referred the writer to the peculiar system of business practised by persons—his colleagues—as the true solution of the cause of Railway depreciation, and then denounced the jobbers' *Weekly Share List* as a disgrace to the press and to the Committee of the Stock Exchange, from whom it emanated. In denouncing the fraud and falsehoods published in the jobbers' *Weekly Share List*, Mr. Hudson indirectly denounced also the *Times*, which had copied the frauds and falsehoods into its columns, and had, in other ways, shewn itself unmistakeably in alliance with the jobbers who organised the paper, governed its movements, and who were to profit by those movements."

Railways and Carriers.—No. 164.

The Great Western have another action against them by the assignees of Parker, the carrier, to recover £6,000 for overcharges—the list of which fills folio volumes two feet in thickness, and the list alone costs £1,300. Pickford's case with the South Eastern goes over till April. The time has arrived for the Companies to enter more seriously into the consideration of this subject.—*Railway Record*, 19th February, 1848.

Concert in a Tunnel.—No. 165.

A concert was held on Friday, 18th May, 1849, in one of the gigantic tubes intended to form the Britannia Bridge, about to be erected over the Menai. Candles placed by couples in four alternate tiers, about 500 in number, illuminated the scene. The music, vocal and instrumental, traversed the whole length of tubing with scarcely diminished volume. The effect is said to have been pleasing, the brilliantly-lighted perspective being at least 157 yards long. The tube is nearly 15 feet wide, and about 30 feet high. Upwards of 600 of the *élite* of the neighbourhood occupied the front of the orchestra, and the other end of the tube was crowded with working people.

Working Railways by Contract.—No. 166.

The following are some of the details of the contract which was concluded, in 1849, between the Directors of the North Staffordshire Railway Company and Mr. Wright, the extensive coach manufacturer, of Saltley, near Birmingham. The contract was let at the offices of Messrs. Burchell and Co., solicitors, 47, Parliament-street; and amongst the parties present were Mr. Joseph Wright (who obtained the contract); Mr. T. Brassey; Messrs. Tayleur and Co., of Warrington; Brown, Marshall, and Co., of Birmingham; Kitson and Co., and Wilson and Co., of Leeds; the Bromsgrove Railway Carriage Company; and Mr. Gooch, Locomotive Manager of the South Western Railway. Fourteen tenders were sent in.

It is limited to the maintenance of the rolling stock, and the general traffic of the line; but in no way interferes with the stations, clerks, and receipts of the Company.

The main provisions of the agreement are—

The whole of the locomotive engines and carriages are to be delivered into the hands of the contractor for ten years. The contractor is to occupy and pay a rental on the original cost of the workshops, engine-houses, and carriage-sheds, together with turn-tables, rails, sleepers, and tools. He is also to take upon himself all the water-cranes at stations, and the Company's existing contracts for water, &c.

These items, taken at a per centage, will amount to nearly £5,000 per annum.

The contractor has to maintain and work the locomotives, carriages, waggons, &c., at a mileage rate, and return them at the expiration of the contract, in proper working order and condition, as they were when they were received by him. He has to employ competent foremen, engine-drivers, firemen, and cleaners; and to supply coke, water, grease, oil, lamps, and every requisite for the running of the stock.

The contract agreed upon is 1s. 1d. per mile for passenger trains.

The contractor has to replace all stock worn out, destroyed by accident, or rendered unfit to run. He is also liable to all damages or losses sustained by the Company from collisions, occasioned by negligence or defects in the rolling stock,

(and, we apprehend also, to pay any compensation for injury to life, of any passenger from such accident.)

The Company deduct from the contract price, to form a deposit per mile for locomotives, one-sixth of a penny for first-class carriages, one-eighth of a penny for second-class, one-tenth of a penny for class and vans, and one-twelfth of a penny for every other description, and waggons. The mileage rate is computed for eight carriages exclusive of engines and tender; and an allowance or deduction per mile for each carriage more or less than eight, and for 125 tons of goods, with an allowance or deduction of one-sixteenth for each ton over or under. The mileage allowed is for the mile run, no allowance being made for shunting.

The contractor is subject to penalties for the late arrival or departure of the trains; and to a penalty of £10,000 in case he breaks or does not fulfil his contract to the satisfaction of the Company's engineer.

The Company, according to the agreement, have a right to determine the contract, by a month's notice, on paying, as a compensation, a sum not exceeding £10,000.

Four sureties are to be provided by the contractor, in the sum of £20,000.

The trains are to be run by the contractor on these terms, deducting a depreciation fund, so as to enable the contractor to return them their rolling stock, at the termination of the contract ten years hence, in as good a condition as it is when put into the hands of the contractor. Over and above the sum which the Company pays to the contractor, they will have to pay the salaries of their secretary, engineer, check-takers, clerks, and porters.

Mr. Wright, the successful competitor, is a man of great intelligence as well as ample means, having been for many years one of the most extensive mail contractors of England. Such a man would not enter into a contract for a period of ten years without knowing what he is about. But there were other competitors equally intelligent and practical as that gentleman. There were, for example, Mr. Brassey, Messrs. Tayleur and Co., Messrs. Brown, Marshall, and Co., Messrs. Wilson and Co., Leeds, and the Bromsgrove Railway Carriage Company. The perfect practicability of the thing is proved by the fact of such parties becoming competitors for the contract.

Geological Features of New Holland.—No. 167.

In constructing the pier at New Holland, near Hull, in 1848, the following was the character of the strata pierced:—

At 1 Chain from the shore.		At 5 Chains.		At 20 Chains.	
	ft. in.		ft. in.		ft. in.
Warp	16 2	Warp	7 4	Peat	2 0
Peat	2 0	Peat	5 2	Soft Clay and Peat ..	3 6
Peat and Clay....	0 9	Silt	6 3	Stiff Brown Clay..	2 3
Peat	1 0	Hard Clay	5 3	Silt and Clay	5 9
Silt	0 11	Clay	5 0	Red Gravel and	
Sand	1 8	Chalk	17 3	Sand	2 5
Soft Clay	10 9	Depth of Pier..	46 3	Brown Clay.....	4 6
Hard Clay.....	8 7			Silt	7 10
Chalk	14 5			Soft Clay	2 10
Depth of Pier..	56 3			Depth of Pier..	31 1

Cost of Working Stock on the London and North Western Railway.—No. 168.

In the Report of the Directors of the London and North Western Railway to the Proprietors, at a meeting held the 11th August, 1848, we find the following statement :—

Under the second head of expenditure is comprised a further charge for working stock, required for an extension of traffic on the Lancaster and Carlisle Railway, and for working the Chester and Holyhead Railway, which the Directors have undertaken for a period of years. As this item may be liable to misconstruction, the following Table of the charge for stock since the opening of the various lines now consolidated in the London and North Western Railway, with the progressive increase of mileage, is submitted :—

Year.	Total Charge.	Total Mileage Worked.	Per Mile.
	£		£
1840	602,999	233½	2,579
1841	628,700	260½	2,411
1842	685,916	260½	2,630
1843	687,546	285½	2,406
1844	708,959	285½	2,481
1845	805,691	303½	2,656
1846	1,135,987	502½	2,259
1847	1,462,900	555	2,635
1848	1,674,668	633½	2,646

It will thus be seen, that while the demands on the service, in consequence of increased accommodation and reduced charges, are much greater than heretofore, the ratio of the moving stock to the mileage worked remains about the same, and continues to be very much less than that of other Railway Companies.

Strength of Pillars.—No. 169.

Mr. Buchanan communicated, in 1848, to the Scottish Society of Arts, an interesting exposition of the strength of materials, including the compressive strength on posts and pillars, and the remarkable effects of the length of the pillar in diminishing its strength. On this subject much light has been thrown by the experiments of Messrs. Hodgkinson and Fairbairn. Pillars or rods were tried of different lengths, from 3 inches to 5 feet, and of different diameters; rods half an inch diameter, with 3½ inches length, bore 11 tons; but when the length was 7½ inches it only carried 5 tons; when 15 inches long, 3 tons; and at 30 inches, only 1½ cwt. From these experiments a general rule may be drawn for different lengths. Taking the strength of cast iron as formerly given at 50 tons per square inch, this will hold good in pillars till the length reaches five times the diameter, and then it begins to diminish. When the length is ten times the diameter, the strength is reduced in the proportion of 1½ to 1; with the length at 15 times the diameter, it is reduced as 2 to 1; twenty times, as 3 to 1; thirty times, as 4 to 1; and forty times, as 6 to 1. Hence the great advantage in cast iron of using hollow pillars or

tubes in place of solid metal, whereby, with the same area or section of fracture, the diameter of the pillar is increased, and with it the resistance to flexure, and an increase of strength in proportion to the length. A solid pillar, for instance, 6 inches in diameter, if extended to $7\frac{1}{2}$ feet in length, would be weakened one-half, but if cast hollow, 10 inches in diameter, and three-fourths of an inch thick, giving the same weight of metal per foot in length, it might then be extended to $12\frac{1}{2}$ feet, and still possess the same strength as the other. In all these cases a remarkable circumstance was observed in regard to the mode of applying the strain. With the ends of the pillar turned flat, and a flat plate interposed at top and bottom, which is the case in supporting buildings, this was found to sustain nearly three times as much as when the pillar was rounded on the ends, so as to make the force pass directly through the axis, as occurs so frequently in machinery with the connecting-rods of steam-engines, and in other cases.

Mixed Gauge.—No. 170.

J. Locke, Esq., M.P., in a letter addressed to Lord John Russell, M.P., on Railways, in 1848, states,—

“It is admitted that the safety of a train in rapid motion on two narrow bars of iron, called rails, is not likely to be augmented by increasing the number of breaks or openings in the rails by what are called switches, points, and crossings; on the contrary, all persons agree that such breaks in the rails for local convenience in making sidings or branch lines, diminish, in some degree, safety at high speeds, and that but for such purposes they ought to be avoided. See, then, how such breaks will be increased by the mixed gauge. Consider, that whilst in what is technically called a through crossing (a connexion between one line and another) there are in a simple gauge but two crossings and two sets of switches, there are twelve crossings and four sets of switches necessary for the double gauge, and five switches and eight crossings for what is termed the three-rail system. These crossings, for local convenience, are necessarily numerous, and thus this enormous augmentation of risk must be incurred wherever these communications are required. There are now on the main line of the London and South Western, between London and Southampton, 130 switches and 130 crossings, or breaks of rails. If the double gauge were adopted, there would be no less than 260 switches and 780 crossings, in order to give the same facility of access to both gauges.”

Opinion of Railways in 1825.—No. 171.

The following remarks were made in the “Quarterly Review” in 1825:—

“As to those persons who speculate on making Railways generally throughout the kingdom, and superseding all the canals, all the waggons, mails and stage-coaches, post-chaises, and, in short, every other mode of conveyance by land and by water, we deem them and their visionary schemes unworthy of notice. What, for instance, can be more *palpably absurd and ridiculous* than the following paragraph,”—in which a prospect is held out of locomotives travelling twice as fast as stage-coaches. “We should as soon,” adds the reviewer, “expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve’s ricochet rockets as trust themselves to the mercy of such a machine, going at such a rate.”

Cotton Goods Exported to America.—No. 172.

Below is a Statement of the British Manufactures of Cotton, including Twist and Yarn, Exported from the United Kingdom to the United States of America :—

Year.	COTTONS			COTTONS entered by value, viz.: Hosiery, Lace and Small Wares.	COTTON THREAD.		COTTON TWIST and YARN.		TOTAL DECLARED VALUE.
	Entered by the Yard.		Quantity.		Declared Value.	Quantity.	Declared Value.		
	Quantity.	Declared Value.							
	Yards.	£	£	lbs.	£	lbs.	£	£	
1815..	68,230,504	4,367,516	289,229	39,861	17,471	2,584	1,123	4,675,339	
1816..	36,410,689	2,308,665	312,491	55,479	22,402	3,856	1,404	2,644,962	
1817..	32,182,020	1,739,470	119,407	43,134	17,146	3,994	1,916	1,877,939	
1818..	40,612,332	2,252,364	166,165	91,508	27,742	3,188	781	2,447,052	
1819..	19,467,620	1,011,375	84,228	62,996	17,498	5,456	1,538	1,114,639	
1820..	24,232,429	1,158,736	26,800	42,313	11,383	1,100	226	1,197,145	
1821..	39,034,289	1,871,585	81,222	163,985	38,310	3,404	697	1,991,814	
1822..	37,982,311	1,678,487	112,483	127,972	27,168	5,220	737	1,818,875	
1823..	36,249,381	1,543,864	95,952	87,568	17,535	1,050	261	1,657,612	
1824..	41,864,462	1,820,786	150,108	132,635	26,909	14,260	2,372	2,000,175	
1825..	46,771,672	2,119,095	155,898	172,555	33,639	7,929	1,817	2,310,449	
1826..	31,304,363	1,338,912	79,402	180,953	35,915	4,067	871	1,445,100	
1827..	52,856,809	2,257,955	204,405	344,042	64,670	8,914	1,547	2,528,577	
1828..	36,200,427	1,612,466	135,890	308,305	49,132	100,285	6,515	1,804,003	
1829..	32,552,062	1,346,023	129,841	173,230	25,493	30,182	1,928	1,503,285	
1830..	49,351,574	2,055,658	206,301	274,881	43,206	48,980	3,598	2,308,763	
1831..	68,587,893	2,518,824	284,563	484,690	59,864	317,392	19,063	2,882,314	
1832..	31,508,744	1,049,375	153,683	278,651	39,426	82,104	5,045	1,247,529	
1833..	45,141,989	1,885,967	285,888	454,999	54,947	112,575	6,255	1,733,047	
1834..	45,630,862	1,394,057	215,262	458,495	62,390	107,443	6,693	1,678,402	
1835..	74,962,925	2,392,991	260,828	623,311	67,082	126,888	8,529	2,729,430	
1836..	62,042,139	2,115,060	304,419	450,523	57,486	212,203	14,753	2,491,718	
1837..	17,481,855	594,822	93,589	197,381	23,983	219,712	13,359	725,753	
1838..	38,493,113	1,206,364	200,357	527,302	64,197	110,235	5,349	1,476,267	
1839..	37,236,052	1,144,749	220,767	884,535	93,806	117,105	7,760	1,467,082	
1840..	32,073,004	898,469	150,277	469,994	61,332	264,934	13,361	1,123,439	
1841..	40,200,996	1,188,992	210,011	617,433	89,378	589,148	28,978	1,517,359	
1842..	12,855,879	358,573	78,449	306,539	47,362	39,930	2,892	487,276	
1843..	21,118,454	602,119	127,923	493,015	69,544	82,053	4,845	804,431	
1844..	29,356,301	802,176	160,255	604,473	87,326	32,810	3,151	1,052,908	
1845..	31,237,594	838,282	137,352	475,914	72,563	91,560	8,043	1,056,240	
1846..	37,105,895	942,267	116,916	554,929	70,999	39,051	3,475	1,133,657	
1847..	105,423,188	2,305,103	206,076	1,051,413	119,918	57,327	4,098	2,635,195	

Trade between England and America.—No. 173.

The following particulars show the Trade of the United Kingdom with the United States of America:—

Years.	OFFICIAL VALUE OF Imports from the United States of America.	OFFICIAL VALUE OF EXPORTS TO THE UNITED STATES OF AMERICA.			DECLARED VALUE of British and Irish Produce, and Manufac- tures Exported to the United States of America.
		British and Irish Produce and Manufactures.	Foreign and Colonial Merchandise.	Aggregate of Exports.	
1815..	2,780,725	12,073,127	442,619	12,515,746	13,473,092
1816..	2,731,025	7,807,063	242,363	8,049,426	9,567,258
1817..	3,325,512	6,649,353	75,996	6,725,349	6,940,713
1818..	3,670,273	8,599,418	144,440	8,743,858	9,450,757
1819..	2,840,372	4,375,409	73,734	4,449,143	4,929,816
1820..	3,882,242	4,020,085	59,498	4,079,583	3,875,286
1821..	3,831,058	6,619,615	185,372	6,804,987	6,231,881
1822..	4,161,641	7,263,209	248,755	7,511,964	6,712,670
1823..	5,652,885	6,143,566	154,882	6,298,448	5,464,874
1824..	4,167,386	6,943,186	381,885	7,325,071	6,090,395
1825..	5,892,931	7,564,731	275,459	7,840,190	7,018,934
1826..	5,136,334	5,809,336	147,800	5,457,136	4,659,018
1827..	8,201,711	8,543,250	372,355	8,915,605	7,018,272
1828..	5,925,617	6,694,695	303,317	6,998,012	5,810,315
1829..	6,202,606	5,854,397	249,123	6,103,520	4,823,415
1830..	8,055,962	7,843,907	392,770	8,236,677	6,132,346
1831..	8,970,342	12,007,208	588,965	12,596,173	9,053,583
1832..	8,296,488	7,017,048	301,450	7,318,498	5,468,272
1833..	8,816,088	10,569,567	438,218	11,007,785	7,579,699
1834..	10,276,628	9,458,717	311,139	9,769,856	6,844,989
1835..	10,357,743	14,220,524	1,093,335	15,313,859	10,568,455
1836..	10,937,407	14,480,514	635,786	15,116,300	12,425,605
1837..	11,757,477	5,247,092	445,982	5,693,074	4,695,225
1838..	15,209,779	9,789,669	533,434	10,323,103	7,585,760
1839..	11,466,667	10,630,182	455,267	11,085,449	8,839,204
1840..	18,062,638	7,284,938	300,071	7,585,009	5,283,020
1841..	13,221,391	9,978,090	489,981	10,468,071	7,098,642
1842..	15,181,342	4,890,572	176,800	5,067,372	3,528,807
1843..	20,738,008	7,206,787	365,714	7,572,501	5,013,514
1844..	18,813,544	11,382,494	639,976	12,022,470	7,938,079
1845..	22,898,695	10,234,434	554,770	10,789,204	7,147,663
1846..	16,945,758	9,710,138	606,453	10,316,591	6,830,460

Note.—The Trade with Florida is included in the foregoing Statements of Imports from and Exports to the United States of America, for the entire series of years which they severally embrace.

The aggregate value of the Imports from and Exports to the United States in the year 1847 cannot at present be exhibited, a sufficient interval of time not having yet elapsed since the close of the year to admit of the final adjustment of the Registers which show the Trade with individual Countries.—May, 1848.

Captain Laws.—No. 174.

At a meeting of the Great Northern Railway, 12th August, 1848, Captain Laws, in reply to some remarks from Mr. Hughes, stated,—

"With regard to what had been said relative to his salary, he had no wish to appear mercenary or desire to be rich. He had much rather be useful than rich, and he did not wish to make any observation on the proposed reduction of his salary; for, even if the proprietors thought fit to dispense with his services, he felt he should have no business to make a remark upon the subject. Two years ago, when he was called upon to fill the situation he then held, he was in a position in which he received as much as from that Company, and had an offer, with security, to guarantee him the same amount for ten years; but he preferred joining the Great Northern. He had never received one farthing out of their coffers with the one hand which he had not paid back with the other, as calls upon their stock, and he believed his friend Mr. Mowatt had pursued a similar course. The honourable proprietor who proposed the resolution appeared to be under some misapprehension relative to what he received from the situation of Director in that and other Companies—the fact being, that he received nothing beyond the £2,000 as superintendent of that Company. Of course he should submit to anything, with respect to that salary, upon which the Directors and Proprietors might decide. Whether he was dismissed from their service, or his salary reduced, he should bow to the decision.

Cost of Railway Surveys.—No. 175.

At the meeting of the London and South Western Railway, 17th February, 1848, the following remarks were made:—

"Mr. Puncher concluded his remarks by referring to a statement published in the *Times* in December last, to the effect that Railway surveyors were in the habit of copying surveys from documents in the Government offices, at the charge to themselves of 10s. per mile, while their charges to the Companies for these same plans varied from £40 to £70 per mile. He wished to know if anything of the kind had been done in this Company.

"Mr. Joseph Locke, M.P. (engineer-in-chief to the Company). remarked, in reply, that there was no document in England sufficiently accurate for the purpose mentioned, though in Ireland there was the Ordnance Survey. He added, that in every case the surveyor's charges came under his immediate inspection; and he could point out many instances in which their charges had varied from £8 to £14 per mile."

And on this subject the "Railway Record," 19th February, 1848, remarks,—

"The general supposition that Railway surveys for projected lines have been made, not from 'actual surveys,' but from existing maps, as regards the great majority of schemes, is not accurate as to the source whence obtained—the truth being that, in England, Ordnance maps cannot be used for that purpose, being on too small a scale; but *parish* maps and *tithes* maps are copied at a cost of about 30s. a mile, and sometimes cursorily compared with the ground; £20 to £50 a mile have been charged for this in disreputable quarters, even where 'actual surveys' were bargained for. This is independent of the 'sections' which, of course, require that the ground should be actually 'levelled.'"

Why name an Engine "Dragon?"—No. 176.

On the North Staffordshire Railway, 8th March, 1848, an official trip took place on the Norton Bridge branch, from Stafford to the Potteries. Six powerful new engines started from the Stafford station, on the London and North Western line, and reached Stone soon after 3 p.m., where they were joined by a party of gentlemen and shareholders, who partook of luncheon; the whole party then proceeded to Stoke-upon-Trent, the engines covered with numerous banners, bearing appropriate inscriptions. The engine which led the van had the word "Dragon" boldly emblazoned on its boiler. The name of this engine originated, says the *Staffordshire Mercury*, in a suggestion by Mr. C. J. Mason, on the occasion of the cutting of the first sod. Mr. Mason observed that, within the memory of some of the oldest inhabitants, the materials and manufactured goods of the district were conveyed on the backs of pack-horses, and that the most celebrated animal employed in that business—one who "bore the bell" for the greatest number of years—was known far and wide by the name of "Dragon." He thought, therefore, as the Potteries had progressed from pack-horses to canals, and were then about to exchange the creeping boat for the flying steamer, that the Directors would do well to distinguish their first locomotive by the same name.

Railway Accounts.—No. 177.

"Punch," in March, 1848, furnishes the following extract from the "Report of the Hum and Diddlesex" (his own favourite line):—

"The Chairman would now refer to their finance statement. (*Hear!*) He felt bound to say it would be found most satisfactory. £7,000 had been mortgaged on annuities at par, and their debentures were wholly independent of their stock of engines. (*Cheers.*) The permanent way was now in trust for the increased debits on the gradients. (*Hear! Hear!*) From this it was clear that there was £4,000 balance per contra on the new half shares. (A voice: 'What's the receipts?') The Chairman could not be expected to go into such details. They had lately opened six miles of the 'Navvey and Stoker Extension Branch,' which he had no doubt would pay well when a town had arisen at each end, and traffic was induced between them. (A voice: 'What's the expenditure?') The Chairman begged not to be interrupted. The meeting would observe one little item of £56,000 for law expenses. They had triumphed over their opponents. True, they had incurred some trifling expense—but were they, he asked, to be insulted by the Grand Gumption?—(*No!*)—or by any other line? (*No, no! and cheers.*) Then as to the dividend—(*Hear, hear, hear!*)—the secretary had recommended a nett dividend of 10 per cent. (*Hear!*) on the deficit, and this, after paying the surplus and Directors' salaries (which, he was glad to say, had been raised £500 each per annum), left the 4 per cent. incidental expenses as money in hand, which would render it necessary for the shareholders at once to pay up the late £20 calls. (*Sensation.* A voice: 'What is the dividend to be?') The Chairman put it to the meeting whether the gentleman's question had not already been distinctly answered, and after some confusion he vacated the chair, and the meeting separated."

Coals Exported to the United Kingdom.—No. 178.

The following are particulars of the Coals, Cinders, and Culm shipped at the several Ports of England, Scotland, and Ireland, Coastways, to other Ports of the United Kingdom :—

PORTS FROM WHICH SHIPPED.	COALS, CINDERS, AND CULM.		PORTS FROM WHICH SHIPPED.	COALS, CINDERS, AND CULM.	
	1847.	1848.		1847.	1848.
ENGLAND.	Tons.	Tons.		Tons.	Tons.
London	1,706	1,655	Newcastle	2,618,941	2,273,674
Arundel .....	...	99	Shields .....	...	214,709
Portsmouth	4,893	6,359	Sunderland	1,871,171	1,911,812
Southampton ..	503	123	Stockton	727,812	556,950
Poole	315	273	Hartlepool	703,113	922,568
Weymouth .....	...	22	Gainsborough ..	6,480	3,214
Plymouth .....	...	163	Hull	7,889	11,229
Bideford .....	...	50	Goole	144,723	149,979
Bristol	3,055	2,665	SCOTLAND.		
Gloucester	110,633	118,108	Leith	5,492	1,264
Cardiff	432,726	546,961	Borrowstoness ..	56,642	58,912
Newport	436,099	429,217	Grangemouth ..	3,738	4,066
Swansea	373,307	392,371	Alloa	39,668	40,086
Llanelli	204,391	239,886	Kirkcaldy	45,144	38,660
Milford	52,713	55,502	Greenock	185	461
Chester	89,326	100,340	Port Glasgow ..	160	...
Runcorn	63,766	64,777	Glasgow	56,665	59,419
Liverpool	15,390	18,393	Irvine	161,925	221,803
Preston	33,830	49,314	Ayr	61,689	75,145
Lancaster	4,324	4,793	IRELAND.		
Whitehaven	308,846	295,565	Dublin .....	...	35
Maryport	195,159	183,239	Ross	724	1,080
Carlisle	31,386	27,599			
Berwick	70	539	Total	8,874,599	9,074,079

Note.—At Page 84, No. 117, the Exports of Coals are in error stated to be to the "UNITED KINGDOM;" it should have been to "FOREIGN COUNTRIES AND THE BRITISH SETTLEMENTS ABROAD."

Praise to Professional Men.—No. 179.

At a meeting of the South Western Railway, 25th August, 1848, the Chairman (Mr. Chaplin, M.P.), in referring to their late Parliamentary struggles, said,—

"And here I would make an observation of gratitude to our professional gentlemen, our engineers and solicitors, and the counsel whom we employed on that occasion. Nothing could exceed their devotedness, and their desire to bring about these results. I regret much to state that our respected secretary has been for a long time confined to his bed, his illness, I believe, having been mainly brought on by the exertions he made on that occasion; and in addition to the pain and trouble that gentleman has endured, a greater onus of responsibility has been thrown upon our solicitors. I take this opportunity of expressing our warmest thanks to our professional gentlemen for their devotedness; for such has been the exertion of our staff in the war, that I hope, having now arrived at a successful result, we shall have their assistance and fellow-labouring in the paths of peace."

French Funds.—No. 180.

In January, 1797, the price of the Five per Cent. Rentes opened at 8*f.* 5*c.*; in December, the same year, they fell to 6*f.* 16*c.* In 1800, the highest price was 44*f.*, and the lowest 17*f.* 38*c.* In 1804, the year of the establishment of the empire, the price rallied, and touched 59*f.* 75*c.* In 1812, the period of the great wars, the Five per Cents. were quoted at 83*f.* 30*c.* for the highest price, and at 76*f.* 50*c.* for the lowest. In the year 1814 the lowest price was 45*f.*, and the highest (in the month of August) 80*f.* In 1815 they reached 81*f.* 65*c.*, and subsequently fell, on the 1st of December, to 52*f.* 30*c.* In 1816 they rose to 64*f.* 40*c.*, and then again fell to 54*f.* 30*c.* During the following thirty years of peace the highest price was 126*f.* 30*c.*, quoted on the 4th of March, 1844; and the lowest price was 55*f.* 5*c.*, quoted on the 2nd of January, 1817. On the 22nd of February, 1848, the Five per Cents. closed at 116*f.* 75*c.*; on the 7th of March, 1848, they opened at 97*f.* 50*c.* and shut at 89*f.* This price is in advance of the quotation for the 2nd of April, 1831, since on that day Five per Cent. Rentes declined to 74*f.* 80*c.* The creation of the Three per Cent. Rentes took place on the 6th of May, 1825. Between that date and the close of 1847, the highest price was 86*f.* 25*c.*, attained on the 22nd of July, 1840, just previous to the receipt of the news on the Bourse of the treaty signed on the 15th of that month between England, Austria, Prussia, and Russia, for regulating the affairs of the East, and from participation in which France was excluded. The lowest price of the Three per Cents. occurred on the 2nd of April, 1831, nine months after the revolution of July, when they were quoted at 46*f.* On the 7th of March, 1848, they descended nearly to the same point, bargains having been done at 47*f.*—*Railway Chronicle*, 18th March, 1848.

Why did the Great Western wish to go to Birmingham?

No. 181.

Mr. Russell, M.P., made the following remarks at a meeting of the Great Western Railway, 17th August, 1848:—

“It may be asked, what business has a Company, calling itself the Great Western, to proceed to Rugby, to Birmingham, and to Wolverhampton? I answer that it was against our will, and we never should have gone—we refused going to Birmingham and Wolverhampton till the London and North Western had concurred with the South Western in forming lines of narrow gauge through the very heart of our district, by Newbury, by Swindon, by Didcot, by Oxford, and by Banbury, to the North. We never should have thought of going to Birmingham if the London and North Western had not concurred with the Midland in pushing their lines down even to Bristol. I do not advert to these circumstances for the purpose of ripping up old wounds, which I sincerely desire should be healed, but I am anxious on this, the last occasion on which I shall, I hope, ever be called upon to advert to the question, to enter a justification of ourselves against the imputations still unceasingly cast from various quarters, that the Great Western is a contentious and pugnacious body, and that they have been the aggressors against the London and North Western. The Birmingham and Oxford Purchase Bill has now been read a third time in the House of Lords, and awaits only the assent of the Crown, and may therefore properly be considered as having been passed. With that bill an end may be put to the unhappy dissensions between ourselves and the London and North Western. Indeed, with the

proceedings of this session I think every important point that has been in controversy, not only with the London and North Western, but with the other of our rivals, has been settled; and I hope we shall all be too wise to revive them. It has been our duty, and it must be our duty, to protect our own traffic; and I say sincerely, on the part of the Great Western, that we are most earnestly desirous to preserve the most amicable relations with all our neighbours, and we think that a better opportunity than the present was never yet presented to consolidate our respective interests."

What Traffic will the London and Birmingham Lose?

No. 182.

At a meeting of the London and North Western Railway, 11th August, 1848, the following was stated to be the loss by the opening of the Birmingham and Oxford, and the Great Northern Railways:—

Mr. MOORE asked the estimated traffic per annum between the London and Birmingham, that the Birmingham and Oxford would subtract.

The CHAIRMAN was understood to say that it was 7 per cent. only upon the gross receipts, and, unless there was a great reduction in the present charges of the Great Western, they must not expect to get an ounce of the traffic.

Mr. MOORE then wished to know what would be the loss to the general traffic when the Great Northern and lines to the North and North-east were completed and opened, and whether the development of the Irish traffic, *via* the Chester and Holyhead, the opening of the Scottish lines, and of the Leeds, Dewsbury, and Manchester, would compensate for the probable abstraction occasioned thereby, and the rivalry of the Birmingham and Oxford?

The CHAIRMAN replied that the inquiry was of so problematical a character that it was difficult to give a reply.

Capt. HUISE said that, as regarded the Great Northern line, it might be taken at about 3 per cent. on the gross annual income.

Mr. ALSTON, of Liverpool, objected to hypothetical questions and replies. At the next meeting they might be brought forward as facts.

Cost of Engineering.—No. 183.

In the Report of the Committee of Investigation appointed by the Shareholders of the Liverpool, Manchester, and Newcastle-upon-Tyne Junction Railway, Feb. 8th, 1848, are the following remarks:—

"CONTRACT WITH ENGINEER.—In August, 1847, a contract was entered into with Mr. Hawkshaw to provide for all the duties of the engineering department at £400 per mile (the line being 54 miles), and to receive in 1847 £3,000. 1848 £4,000, 1849 £5,000, 1850 £5,000, 1851 £4,000, and the balance on the completion of the works—parliamentary business or alterations not to be included in the contract. On the Directors determining to suspend the works, a further contract was entered into, by which it was agreed that the year in which the works should be re-commenced should count as the second year—a reasonable allowance being made to Mr. Hawkshaw for any extra expenses and labour entailed by the suspension. During the last half-year Mr. Hawkshaw was paid £3,000 under the contract, and £350 for his charges and expenses in reference to the Act for the Burnley link."

Statistics of American Railways.—No. 184.
The following are Statistics of the Railways in operation in the State of Massachusetts in the year 1847.

NAME.	Length. Miles.	Cost. Dollars.	RECEIPTS.				EXPENSES.				NETT INCOME.	
			From Passen- gers.	From Freight.	From Mails, &c.	Total.	Road Bed.	Motive Power.	Mis- cellaneous.	Total.	Total.	Per Cent.
Worcester	45	4,113,610	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
Western	155	8,769,474	304,586	374,663	42,927	722,170	66,195	91,141	220,650	381,986	340,184	8.27
Norwich and Worcester ..	59	2,187,250	502,322	795,346	37,668	1,325,336	199,312	124,111	353,366	676,789	648,547	7.40
Connecticut River ..	36	1,167,157	114,310	108,005	12,581	234,896	17,967	35,609	84,857	141,433	93,463	4.40
Pittsfield and N. Adams ..	19	446,354	70,208	48,320	5,424	123,952	9,335	9,546	36,773	49,694	74,298	6.37
Berkshire*	21	600,000	15,763	10,006	206	26,975	6,081	1,008	10,709	17,798	8,177	1.83
Providence	41	2,544,716	226,103	118,173	19,052	363,328	21,733	32,556	121,057	175,346	42,000	7.00
Taunton	11	303,743	34,818	16,613	2,296	53,727	3,929	3,315	18,278	25,513	28,214	9.39
New Bedford	20	483,883	66,589	21,593	2,862	91,044	11,174	6,132	29,617	46,923	44,121	9.12
Stoughton Branch	5	94,576	5,602	4,327	200	10,129				4,009	6,129	6.48
Lowell	25	1,956,719	202,612	234,815	4,129	441,556	54,081	59,517	139,811	253,409	195,147	9.97
Nashua	14	500,000	69,143	82,680	5,572	157,395	95,211	19,012	51,714	96,937	60,398	12.01
Boston and Maine	73	3,021,172	321,182	179,589	10,354	511,505	22,382	32,311	165,357	220,360	291,243	9.64
Fitchburg	49	2,406,724	165,092	202,257	17,116	384,465	20,389	27,090	113,385	161,434	223,011	9.27
Lexington	7	221,310				6,354	1,190		629	1,819	6,515	2.94
Eastern	38	2,937,206	343,373	60,455	31,013	434,841	15,140	12,391	107,552	135,083	289,798	9.87
Old Colony	37	1,636,682	124,776	41,598	4,850	171,154	14,783	11,681	60,557	87,021	84,133	5.14
Fall River	42	1,070,988	77,040	30,991	3,323	111,354	8,314	8,278	61,294	77,986	33,368	3.12
Total	698	34,461,513	2,650,513	2,309,681	199,553	5,210,681	498,007	476,698	1,374,686	2,533,391	2,656,690	7.71

* Let to Western Railroad.

† Let to Fitchburg Railroad.

STATISTICS OF THE RAILWAYS IN OPERATION IN THE STATE OF MASSACHUSETTS IN THE YEAR 1847—continued.

NAME.	Total Receipts per Mile Run.	Expenses per Mile Run.	Net Income per Mile Run.	Miles run by Trains.				Passengers Carried.		Merchandise Carried.	
				Passenger.	Freight.	Others.	Total.	Total.	One Mile.	Total.	One Mile.
				Number.	Number.	Number.	Number.	Number.	Number.	Tons.	Tons.
Worcester	1.78	0.94	0.84	211,206	167,263	26,586	405,155	598,305	14,480,678	283,178	10,755,799
Western	1.61	0.82	0.79	236,677	513,772	68,961	819,410	388,111	17,867,644	274,691	28,037,628
Norwich and Worcester	1.16	0.69	0.47	119,079	74,390	9,103	202,572	188,487	2,991,643	91,063	2,877,305
Connecticut River	1.17	0.47	0.70	74,059	23,221	8,878	106,158	237,215	2,359,925	44,480	805,927
Pittsfield and N. Adams	0.78	0.53	0.25	16,423	11,241	5,548	33,212	35,828	383,332	10,680	171,040
Berkshire	1.98	..	1.28	13,146	19,782	5,900	32,928	38,896	632,080	9,673	137,087
Providence	1.60	0.77	0.83	169,107	51,954	5,300	226,361	487,478	7,196,703	87,605	1,937,027
Taunton	1.82	0.86	0.96	92,090	6,886	555	99,431	108,539	1,180,886	30,461	332,521
New Bedford	1.09	0.56	0.53	63,180	19,466	1,290	83,936	97,356	1,627,670	19,352	338,902
Stoughton Branch	1.74	0.69	1.05	3,857	1,421	555	5,833	16,748	175,854	7,918	86,374
Lowell	1.79	1.01	0.78	164,709	70,749	15,092	250,546	484,683	9,523,436	281,441	7,117,656
Nashua	2.99	1.84	1.15	29,508	20,100	2,948	52,553	225,984	3,119,307	151,111	2,238,121
Boston and Maine	1.58	0.68	0.90	227,583	73,118	23,580	324,281	728,307	12,869,318	130,428	3,612,480
Fitchburg	1.50	0.63	0.87	138,140	70,352	28,317	236,809	494,035	8,009,437	244,476	5,198,497
Lexington .....	..	..	..	..	..	..	..	..	..	..	..
Eastern	1.76	0.56	1.20	203,352	33,804	4,375	241,531	892,896	12,757,026	41,047	1,165,873
Old Colony	1.12	0.57	0.55	105,105	27,944	19,644	152,693	389,994	4,904,861	42,707	748,551
Fall River	0.99	0.69	0.30	79,838	26,292	6,240	112,390	173,134	3,238,134	29,021	626,259
Total	1.56*	0.77	0.79	18,970,002	1,211,795	225,872	3,335,669	5,556,576	103,037,484	1,769,332	66,187,617

* Average.

Immigrants in America.—No. 185.

The following is a statement of the Number of Immigrants which arrived in each of the United States, distinguishing their Native Countries, Sex, Age, and Occupations, in each of the years ending 30th September, 1846 and 1847:—

STATES.	IMMIGRANTS.				NATIVE COUNTRIES.	1846	1847
	1846	1847					
	Total.	Males.	Females.	Total.			
Maine	5,930	3,436	2,370	5,806	Great Britain } and Ireland }	75,587	128,838
New Hampshire	25	4	3	7	{ *511 British America 20,834 United States..	3,855	3,826
Massachusetts..	14,079	11,958	8,365	208		4,239	4,514
Rhode Island ..	88	134	74	208	West Indies ..	1,252	1,215
Connecticut....	..	43	31	74	Germany	58,735	73,444
New York	98,863	85,059	60,771	145,830	Sweden and }	1,916	1,292
Pennsylvania ..	7,235	7,893	6,692	{ *14 Norway .. }	France	10,583	20,055
Delaware	6	..	..	14,599	Prussia	551	837
Maryland	9,337	6,959	5,050	12,009	Denmark	114	13
Virginia	82	422	274	{ *178 Switzerland ..	698	192	
Carolina { North	3	..	..	874	Mexico	222	..
South	408	119	45	164	Other Countries	896	5,030
Georgia.....	..	4	7	11			
Florida.....	90	102	86	188			
Louisiana.....	22,148	20,784	14,019	34,803			
Texas	354	2,223	1,370	{ *280			
				{ 3,873			
Total	158,648	139,140	99,157	{ *983 239,280	Total ...	158,648	239,256

AGES.	1846	1847	OCCUPATIONS.	1846	1847
Under 5 Years	13,551	18,807	Labourers	19,781	37,572
From 5 to 10 Years	12,447	18,226	Servants	3,730	3,197
" 10 , 15 " ..	10,850	20,128	Merchants	4,186	4,301
" 15 , 20 " ..	19,609	32,111	Professional Men	441	465
" 20 , 25 " ..	36,311	46,570	Mechanics & Manufacturers	13,584	26,150
" 25 , 30 " ..	23,824	36,987	Farmers	33,560	50,036
" 30 , 35 " ..	14,194	24,314	Women and Children not }	1,846	1,055
" 35 , 40 " ..	9,313	16,645	counted in Families.... }		
Above 40 Years	17,164	20,800	Not specified	81,520	116,174
Not specified	1,185	4,976			
Total	158,448	239,564	Total	158,648	238,950

NOTE.—This Return does not include Immigrants by way of the British American Provinces. There are some discrepancies in the Totals.

Anthracite Coal in America.—No. 186.

The following is a statement of the total quantities of Anthracite Coal raised in the State of Pennsylvania, in each year, from 1820 to 1847:—

Years.	Quantities.	Years.	Quantities.	Years.	Quantities.	Years.	Quantities.
	Tons.		Tons.		Tons.		Tons.
1820	365	1827	63,434	1834	376,636	1841	808,913
1821	1,073	1828	77,516	1835	596,603	1842	1,108,050
1822	2,240	1829	112,083	1836	683,057	1843	1,256,312
1823	5,823	1830	174,734	1837	881,476	1844	1,627,235
1824	9,541	1831	176,820	1838	737,407	1845	2,014,888
1825	34,893	1832	363,871	1839	819,328	1846	2,333,594
1826	48,407	1833	487,748	1840	864,414	1847	3,077,170

London and North-Western Railway Stock in 1848.—No. 187.

The following is a statement showing the quantity and estimated actual value of articles included in amount charged to Capital for "Working Stock" of £1,462,901.—January 1, 1848.

ENGINES.	Goods.	Passengers.	Total.	VALUE.	
				Per Engine Average.	Total.
	No.	No.	No.	£ s.	£
Southern Division	71	109	180	1,499 10	269,900
Northern Division	60	126	186	1,321 0	245,705
Manchester and Birmingham	8	25	33	1,400 0	46,200
Engines condemned and used in Pumping, Ballasting, &c. (Southern Division) .....	..	..	12	750 0	9,000
Engines sold, less amount received for six—deducted from Capital Account to December 31st, 1847 .....	..	..	15	....	6,775
			426		
WORK IN PROGRESS.					
Locomotive Department.					
Southern Division .....	..	..	..	....	3,610
Northern Division (Crewe) .....	..	..	..	27,410 0	} 32,894
Ditto (L. & M.) .....	..	..	..	5,484 0	
Ditto (Stores) .....	..	..	..	....	25,802
TENDERS.					
Southern Division .....	..	..	187	250 0	46,750
Northern Division .....	..	..	178	274 0	48,772
Manchester and Birmingham .....	..	..	31	300 0	9,300
TOOLS, MOVEABLE MACHINERY, &c., IN ENGINE SHOPS.					
Southern Division .....	..	..	..	....	31,800
Northern Division .....	..	..	..	....	23,687
Manchester and Birmingham .....	..	..	..	....	3,119
Amount advanced to Sharp, Brothers, } on account of undelivered Engines }	..	..	..	....	5,000
Total for Locomotive Account.....					808,315

STATEMENT OF WORKING STOCK—continued.

PASSENGER VEHICLES.	Southern Division.	Northern Division.	Manchester and Birmingham.	Total.	VALUE.	
					Average Price.	Total.
	No.	No.	No.	No.	£	£
State Carriage	1	..	..	1	900	900
First Class, 6 Wheels	20	8	..	28	420	11,760
Ditto 4 do.	154	136	38	328	320	104,960
Mails	16	16	..	32	250	8,000
Composite	25	6	4	35	200	7,000
Second Class	178	178	45	401	220	88,220
Third Class (closed)	52	80	18	150	170	25,500
Ditto (open)	43	..	32	75	80	6,000
Post Offices	3	..	5	8	390	3,120
Horse Boxes	136	54	20	210	105	22,050
Carriage Trucks	149	56	12	217	88	19,096
Parcel Vans	13	6	7	26	180	4,680
Guard Vans	42	18	2	62	175	10,850
Bullion Vans	4	5	..	9	100	900
Post Office Tenders	6	7	..	13	210	2,730
Luggage Vans .....	..	5	..	5	220	1,100
Parcel Carts .....	..	14	5	19	20	380
Milk Trucks .....	..	2	..	2	60	120
Brake Waggon .....	..	4	..	4	30	120
Convict Carriage Truck .....	..	1	..	1	160	160
	842	601	183	1,626		317,646
Works in Progress and Stores on hand, charged and actually paid for	£ 3,882	£ 5,475	£ 1,200	..	..	10,557
Lamps, Tackles, Couples, and other Carriage Furniture ....	..	..	..	..	..	3,865
Northern Division .....	..	..	..	..	..	2,646
Southern Division .....	..	..	..	..	..	711
Manchester and Birmingham ....	..	..	..	..	..
Total for Carriage Account						£335,425

GOODS VEHICLES.	Southern Division.	Northern Division.	Manchester and Birmingham.	Total.	VALUE.	
					Price.	Total.
	No.	No.	No.	No.		
6 Ton large Goods Waggon	831	100	29	960		
4½ " Ordinary do.	510	1,593	192	2,295		
3½ " Small do.	382	1,077	542	2,129		
Cattle Waggon .....	..	83	30	495		
Coal Trucks (iron)	12	..	653	653		
Timber Trucks	63	24	..	77		
Brake Waggon	117	..	..	117		
Sheep Vans	4	..	..	4		
Powder Magazines	4	..	..	4		
Iron Trolleys	1,913	2,877	1,446	6,236		

STATEMENT OF WORKING STOCK—continued.

				VALUE.	
				Price.	Total.
GOODS VEHICLES, viz:—					£ s.
Southern Division, 1913 at £72 10s. each, average ..				..	138,692 10
Northern Division, 2877 at £56 each ..				..	161,112 0
Manchester and Birmingham, 1446 at £41 10s. ....				..	60,009 0
CRIB RAILS.					
Northern Division			Sets.	£ s.	
			154	5 10	842 0
Manchester and Birmingham			901	5 0	4,505 0
			100	5 0	500 0
GOODS' SHEETS.					
		No.	Value.		
Southern Division	{ Camden	1,520	£3,800		
	{ Intern. Stations	378	756		
Northern Division	{ North	1,400	4,100		
	{ Central	706	1,588		
Manchester and Birmingham		750	1,750		
		4,754	11,994	..	11,994 0
MACHINERY AND STORES.					
Paid for (included in last Valuation), less 10 per cent.				£	
Southern Division			1,758	..	1,583 0
Northern Division			5,008	..	4,508 0
MOVEABLE MACHINERY, &C. AND WAGGON CHAINS, COUPLES AND LAMPS USED IN WORKING GOODS TRAFFIC.					
Southern Division (estimate) .....				..	2,500 0
Northern Division .....				..	2,500 0
Manchester and Birmingham „ .....				..	1,000 0
Total for Goods Account					£389,745 10

No account is here taken of Screws, Jacks, Levers, and other Engine Furniture—of Stationary Engines £3,220, included in last valuation—or of Stores (other than Wheels) paid for in Carriage Department of Southern Division.

ABSTRACT.			
Locomotive Account	£808,315	0	0
Carriage „	£335,425	0	0
Waggon „	£389,745	10	0

Total £1,533,485 10 0

[Captain Huish's Report on Working Stock.]

Broad Gauge and Grand Junction Railway.—No. 188.

Before the Amalgamation of the London and Birmingham with the Grand Junction Railway the latter issued a Circular, on the 11th June, 1845, in which they stated:—

The question at issue has been represented as one entirely of Broad and Narrow Gauge; upon this point, the Directors may observe, that they do not anticipate any

inconvenience whatever to arise from the introduction of the Broad Gauge on the Narrow Gauge Lines, or the mixture of Gauges on the same. On the contrary, looking at express trains running at high speeds, which are introduced on the leading roads, they deem it probable that main lines possessing Trunk Lines on the Narrow Gauge principle may find it expedient to adopt both; and the Directors have ascertained the perfect practicability of adding the Broad Gauge on the Grand Junction, at a very reasonable cost.

Permanent Way and Weight of Stock of London and North-Western Railway.—No. 189.

The following tables will exhibit the comparative progress of the capability of the road, and the strain upon it, in weight and speed :—

CAPABILITY.	Liverpool and Manchester.		Grand Junction.		London and Birmingham.	
	1831.	1848.	1837.	1848.	1837.	1848.
Weight of Rails per yard	35lbs.	60lbs.	65lbs.	65lbs.	75lbs.	75lbs.
Width of Bearings	3 feet	3 to 5ft.	4 feet	4 feet	5 feet	4 feet & 3 feet
Weight of Chair	14½lbs.	22lbs.	20lbs.	20lbs.	25lbs.	25 & 28lbs.
Cube feet in Sleepers ..	..	..	..	..	Blocks 4 feet	Blocks 4 feet
or Blocks	3ft. 6in.	3ft. 6in.	4 feet	4 feet	Slprs. 3ft. 2in.	Slprs. 3ft. 9in.

STRAIN.	Liverpool and Manchester.		Grand Junction.		London and Birmingham.	
	1831.	1848.	1837.	1848.	1837.	1848.
Number of Trains to and from principal Terminus or Station in 24 hours..	*26	90	†14	38	‡19	44
Average of Weight of Engines	TonsCwt 7 0	TonsCwt 15 7	TonsCwt 15 7	TonsCwt 17 3	TonsCwt 12 7	TonsCwt 18 13
Greatest Weight of Engines	TonsCwt 7 0	TonsCwt 17 3	TonsCwt 15 15	TonsCwt 26 5	TonsCwt 12 7	TonsCwt 37 0
Average Speed of Goods Trains	Miles per Hour. 10	Miles per Hour. 19	Miles per Hour. 17	Miles per Hour. 19½	Miles per Hour. 16	Miles per Hour. 20
Greatest Speed of Goods Trains (Exceptional) ..	Miles per Hour. 12	Miles per Hour. 30	Miles per Hour. 20	Miles per Hour. 30	Miles per Hour. 21	Miles per Hour. 32
Average Speed of Passenger Trains	Miles per Hour. 17.	Miles per Hour. 29	Miles per Hour. 20	Miles per Hour. 30	Miles per Hour. 20	Miles per Hour. 30
Greatest Speed of Passenger Trains	Miles per Hour. 24	Miles per Hour. 40	Miles per Hour. 28	Miles per Hour. 50	Miles per Hour. 28	Miles per Hour. 50
AVERAGE WEIGHT OF CARRIAGES BUILT :—	TonsCwt	TonsCwt	TonsCwt	TonsCwt	TonsCwt	TonsCwt
First Class	3 10	4 10	4 0	4 18	3 13	4 6
Second Class	3 5	3 10	3 10	4 10	3 5	4 1
Third Class	3 0	3 2	3 2	3 17	2 10	3 18
Average Weight of Passenger Trains with Engine and Tender	18 0	70 0	60 0	70 0	58 0	76 0
Average Weight of Goods Trains, with Engine and Tender	52 0	126 0	133 0	176 0	124 0	160 0

NOTE.—* Manchester (Victoria). † Stafford. ‡ Euston.

So that, with an average increase in the number of trains of about the following :—

	Liverpool and Manchester.	Grand Junction.	London and Birmingham.
In and out of principal Station of (per cent.)	250	170	123
" Weight of Engines of	114	14	23
" Weight of Carriages of	30	21	18
" Average Speed of	88	35	34
" Average Weight of Trains of ..	350	29	30

there has been, until recently, an increase in the capability of the road of but the following :—

	Liverpool and Manchester.	Grand Junction.	London and Birmingham.
Weight of Rails.....(per cent.)	70	0	0
Bearings.....	0	0	0
Weight of Chair	33	0	0
Size of Sleeper or Block.....	0	0	0

ACTUAL STATE OF THE ROAD.

LINE.	Liverpool and Manchester.	Grand Junction.	Chester and Crewe.	Bolton and Kenyon.	Trent Valley.	Manchester & Birmingham.	Macclesfield Branch.	London and Birmingham.	Coventry and Leamington.	Northampton & Peterboro'.	Aylesbury.	Bedford.	Dunstable.	Total Miles.
	Mls.	Mls.	Mls.	Mls.	Mls.	Mls.	Mls.	Mls.	Miles single	Mls.	Miles single	Mls.	Mls.	
Laid 1837	62½	77	..	½	..	..	..	84½	..	..	..	..	..	168½
1838	..	..	..	..	..	..	..	..	..	..	7	..	..	7½
1839	..	..	21	..	..	..	..	..	..	..	..	..	..	22
1840	..	..	..	..	..	3	..	..	..	..	..	..	..	4
1841	..	..	..	1	..	..	..	..	..	..	..	..	..	1
1842	11½	..	..	1½	..	28	..	..	..	..	..	..	..	40½
1843	2	..	..	1	..	..	..	..	..	..	..	..	..	3
1844	1½	..	..	..	..	..	..	8½	..	..	..	..	..	10½
1845	1	..	..	..	..	4½	4	..	26	..	..	..	..	35½
1846	2	1	..	1½	..	4½	13½	..	21½	..	16½	..	..	60½
1847	3	1½	..	1½	49½	..	2½	..	..	..	..	..	6½	66
1848	2½	7	..	1	..	..	8	..	..	..	..	..	..	18½
Total ...	32	86½	21½	9½	49½	31	9	112½	8½	47½	7	16½	6½	438
Sleepers or Blocks, 5ft. bearings ..	13½	..	..	..	..	..	10½	..	..	..	..	..	..	24½
Ditto, 4ft. ...	..	86½	..	6½	..	..	1	..	..	5½	..	..	..	99½
Do. 3ft. 9in.	13	..	..	..	..	..	55½	..	44½	1½	..	..	..	113½
Do. 3ft. 6in.	..	..	21½	..	..	..	15½	8½	1½	..	..	..	..	48
Do. 3ft.	5½	..	..	3	49½	31	9	30	..	1½	..	16½	6½	151½
Total	32	86½	21½	9½	49½	31	9	112½	8½	47½	7	16½	6½	438
Total Slprs.	204	24½	21½	9½	49½	31	9	72	8½	47½	7	16½	6½	323½
Total Blocks	11½	62½	..	..	..	..	40½	..	..	..	..	..	..	114½
Total	32	86½	21½	9½	49½	31	9	112½	8½	47½	7	16½	6½	438
60lb. Rails .	5½	..	21	..	..	..	..	..	..	..	..	..	..	26½
62lb. do. ...	1	20	..	2	..	..	..	..	..	..	..	..	..	23
65lb. do. ...	..	53½	..	2½	..	31	9	..	..	..	5½	..	..	101½
70lb. do. ...	4½	4	..	..	..	..	..	..	..	..	16½	6½	..	31½
71lb. do. ...	..	..	..	..	..	..	..	..	47½	..	..	..	..	47½
72lb. do. ...	..	..	..	..	20	..	..	..	..	..	..	..	..	20
75lb. do. ...	19	3	..	32	29½	..	86	8½	..	1½	..	..	..	151½
82lb. do. ...	..	..	..	..	..	..	26½	..	..	..	..	..	..	26½
85lb. do. ...	2½	6½	..	1½	..	..	..	..	..	..	..	..	..	10½
Total	32	86½	21½	9½	49½	31	9	112½	8½	47½	7	16½	6½	438

[Captain Huish's Report on Permanent Way.]

Traffic and Working Stock of Railways.—No. 190.

The following table is given by Captain Huish in his report to the Directors of the London and North-Western Railway:—

STATEMENT SHOWING MILEAGE WORKED BY; AMOUNT CHARGED TO CAPITAL FOR WORKING STOCK; AND COMPARATIVE RATE OF SUCH CHARGE PER MILE PER CENT. ON, AND PER POUND OF, LAST HALF-YEAR'S EARNINGS, OF THE FOLLOWING RAILWAYS, ON THE 31ST DECEMBER, 1847.

NAME OF RAILWAY.	Mileage Worked.	Amount of Goods Traffic last Half-year.	Amount of Passenger Traffic last Half-year.	Total Earnings last Half-year.	Value of Working Stock as charged in last report to Shareholders.	Or per cent. on Earnings.	Per Pound of last Half-year's Earnings.	Amount per Mile required if Mileage earnings equalled those of L. & N. W. Co.
London and North Western.....	*555½	£ 382,576	£ 652,392	£ 1,130,129	£ 1,462,900	per cent.	s. d.	£
London and South Western.....	†188	61,788	184,625	246,013	446,762	130	25 10	..
Great Western.....	244½	119,496	360,737	521,040	830,873	189	36 3	4,917
Midland.....	417	218,460	397,130	586,034	1,387,710	159	31 6	3,647
London, Brighton, & South Coast.....	142½	30,071	192,742	224,881	462,922	237	47 4	5,934
Lancashire and Yorkshire.....	201	100,502	94,545	195,408	655,989	193	39 5	4,939
Edinburgh and Glasgow.....	51½	31,781	59,033	90,814	241,000	336	67 0	47,317
						275	53 0	5,461

* The Working Stock of the London and North Western Company included plant for the Chester and Holyhead Line, 60 miles of which has since been opened, bringing down the mileage to £2,376.

† Includes single Line from Redbridge, on Southampton and Dorchester Line. 106 miles worked to 1st March,—128 to 1st June,—and 188 (including single Line) 1st June to 31st December, 1847. Mileage calculated as if 160 miles.

‡ These amounts include Stock for unopened Lines, and, as appears by the Company's recent accounts, also a considerable sum for Work-shops. The comparison in this case is, therefore, not an absolute one.

Thus we see, that the average is more than £3,300 a mile; but that, had these Companies the same traffic per mile as the London and North Western, their mileage charge would be—

South Western	£4,917
Great Western.....	3,647
Midland	5,984
Brighton	4,989
Lancashire and Yorkshire	7,317*
Edinburgh and Glasgow	5,461
The London and North Western being	2,632

It follows, therefore, that these Companies have provided a great excess of Stock, which our experience denies, or that they are paying dividends out of capital, a supposition that cannot be entertained, or (which I take to be the real solution of the question) that the London and North Western Company are undercharged for stock, by having at various times, and in different ways, deducted too large an amount, at the expense of their revenue, and consequently of the dividend of their proprietors.

The following table will show the progressive increase of the charge for stock for the London and North Western Railway, and the mileage since 1840:—

STATEMENT SHOWING TOTAL AMOUNT CHARGED TO CAPITAL, AND RATE PER MILE FOR "WORKING STOCK," FROM DECEMBER 31st, 1840, TO DECEMBER 31st, 1847, INCLUSIVE, BY THE COMPANIES NOW AMALGAMATED AS LONDON AND NORTH WESTERN.

Year.	Total Charge.	Total Mileage Worked.	Per Mile.
	£ s. d.		£
1840	602,999 0 0	233½	2,579
1841	628,700 8 11	260½	2,411
1842	685,916 12 4	260½	2,630
1843	687,546 16 1	285½	2,406
1844	708,959 16 8	285½	2,481
1845	805,691 12 7	303½	2,654
1846	1,135,987 11 7	†502½	2,491
1847	1,462,900 3 8	555½	2,632
1848	Opening of Chester and Holyhead Line }	615½	2,376

Grand Junction Canal Carrying Traffic.—No. 191.

The following statement shows the business done by the Grand Junction Canal Company as carriers; and in their report to the General Assembly, held June 5, 1849, they state:—

"Nothing short of the company taking the conveyance of goods into their own hands could have prevented a large portion of that revenue from being abstracted from the canal; because private carriers, by whom the trade was formerly con-

* See Note at foot of Table, page 81.

† Seventy miles of this opened in 1846 for three months only; one-fourth taken in average mileage.

ducted, have neither the means of meeting the competition of powerful railway companies, nor sufficient permanent interest in the canal, to induce them to make sacrifices necessary to do so with effect."

1848.	Weight carried.	Distance travelled.	No. of Boats.	Average Load per Boat.	Receipts.	Average Rate per Ton.	Tonnage Dues carried to G. J. Canal.
	Tons.	Miles.		Tons.	£ s. d.	£ s. d.	£ s. d.
January ..	1,326	33,344	166	8	1,684 19 6	1 3 11	159 4 10
February ..	1,781	38,557	188	9½	2,301 3 3	1 5 10	278 0 10
March	2,248	43,260	204	11	3,058 19 6	1 7 3	349 6 6
April	2,032	39,114	189	10½	2,798 13 10	1 7 6	298 4 9
May	2,256	41,961	201	11½	3,233 10 4	1 8 8	333 10 6
June	1,544	27,696	134	11½	2,046 17 8	1 6 6	229 5 5
July	2,126	40,351	194	11	2,938 14 11	1 7 8	322 12 1
August	2,225	39,216	182	12½	3,024 19 11	1 7 2	329 1 2
September ..	2,379	40,735	197	12	3,248 9 4	1 7 4	507 13 5
October ..	7,670	78,458	479	16	8,286 1 10	1 1 7	1,393 3 2
November ..	8,626	84,706	508	17	8,776 16 8	1 0 4	1,762 6 9
December ..	8,616	87,972	507	17	8,955 5 6	1 0 9	1,597 17 11
Total, 1848	42,829	595,370	3,149	12½	50,354 12 3	1 5 4	7,560 7 4
1849.							
January ..	9,593	97,310	564	17	10,074 6 10	1 0 11	1,806 3 4
February ..	9,103	95,415	569	16	10,070 5 4	1 2 0	2,298 6 3
March	9,930	101,779	620	16	11,087 16 11	1 2 3	2,429 5 7

The nett TONNAGES for the half-year ending 31st December, 1848, amounted to £40,741 2s.

Grand Junction Canal Working Stock.—No. 192.

The Grand Junction Canal Company became carriers on the 1st January, 1848, and the following is particulars of their working stock, as it stood on the 31st December, 1848:—

	£ s. d.
Stock in stables	228 6 5
81 Waggon, vans, carts, &c.	2,664 15 9
63 Boats, General Traffic	6,862 3 1
39 Boats, Coal Traffic	3,319 11 10
Stock of harness	1,071 13 0
Warehouse stock	766 0 4
406 Horses	11,228 14 0
Office Furniture	160 6 9
	£26,301 11 2

Permanent Way.—No. 193.

The following descriptions of the construction of various permanent ways is extracted from a report by Mr. R. B. Dockray to the London and North Western Railway, in October, 1848, and shows the comparative estimates, number of pieces required, and the expense in

constructing 15 feet length of single line by each of the following methods, exclusive of labour in laying down the road:—

LONDON AND NORTH WESTERN OLD METHOD.

ROBERT STEPHENSON, ENGINEER.

No.	Description.	Cubic Feet.	Weight.	Rate.	
			lbs.	£ s. d.	£ s. d.
2	Rails (75lbs. per yard) ..	750	10 0 0	per ton	3 7 0
2	Joint Chairs ..	60	7 10 0	do.	0 4 0
8	Intermediate ..	160	7 10 0	do.	0 10 8½
20	Iron Spikes for Chairs ..	10	0 0 4	per lb.	0 3 4
5	Sleepers ..	..	0 5 6	each	1 7 6
10	Keys ..	..	0 0 2½	do.	0 1 10½
47					5 14 5

Number of Parts in a mile of single line..... 16,544
 Cost of ditto, exclusive of labour in laying £2,013 14 8

LONDON AND NORTH WESTERN NEW METHOD.

ROBERT STEPHENSON, ENGINEER.

No.	Description.	Cubic Feet.	Weight.	Rate.	
			lbs.	£ s. d.	£ s. d.
2	Rails (82lbs. per yard) ..	820	10 0 0	per ton	3 13 1½
2	Joint Chairs ..	82	7 10 0	do.	0 5 6
8	Intermediate ..	224	7 10 0	do.	0 15 0
5	Sleepers ..	16½	0 5 6	each	1 7 6
10	Keys ..	..	0 0 2½	do.	0 1 10½
22	Trenails for Chairs ..	..	0 0 1½	do.	0 2 0½
49					6 5 0½

Number of Parts in a mile of single line..... 17,248
 Cost of ditto, exclusive of labour in laying £2,191 18 8

CHELTENHAM AND GREAT WESTERN UNION RAILWAY.

I. K. BRUNEL, ENGINEER

No.	Description.	Cubic Feet.	Weight.	Rate.	
			lbs.	£ s. d.	£ s. d.
2	Rails (72lbs. per yard) ..	720	10 0 0	per ton	3 4 6
2	Joint Plates ..	13	0 0 1½	per lb.	0 1 8½
2	Straps for fastening Transomes ..	4½	0 0 4	do.	0 1 6
4	Bolts for do.	12	0 0 4	do.	0 4 0
6	Nuts for do.				
6	Washers do.				
8	Spikes for Rails ..				
4	Screw bolts at Joints of Rail ..	0.6	..	0 0 4½	per foot
4	Fangs do.				
40	Hardwood packings under Rails..	23½	..	0 2 3	do.
2	Longitudinal bearers ..	1.8	..	0 2 3	do.
1	Transome ..	..	..	0 2 3	do.
81					6 14 5½

Number of Parts in a mile of single line..... 28,512
 Cost of ditto, exclusive of labour in laying £2,365 14 8

MIDLAND GREAT WESTERN (IRELAND).

G. W. HEMANS, ENGINEER.

No.	Description.	Cubic Feet.	Weight.	Rate.		
				£	s. d.	£ s. d.
2	Rails (75lb. per yard) .....	..	760	10	0 0 per ton	3 7 10½
2	Joint Plates .....	..	13	0	0 1½ per lb.	0 1 8
16	Screws to hold down Rails	}	29	0	0 4 do.	0 9 8
8	Screw bolts at Joints					
8	Fangs for do.					
2	Longitudinal Bearers	15	..	0	2 3 per foot	1 13 9
2	Transverse Sleepers	4½	..	0	2 3 do.	0 10 1½
4	Trenails for joints of longitudinal bearers .....	..	..	0	0 1½ each	0 0 6
44						6 3 7

Number of Parts in a mile of single line..... 15,488

Cost of ditto, exclusive of labour in laying £2,162 11 8

GREAT SOUTHERN AND WESTERN (IRELAND).

SIR JOHN MACNEILL, ENGINEER.

No.	Description.	Cubic Feet.	Weight.	Rate.		
				£	s. d.	£ s. d.
2	Rails (92lbs. per yard) .....	..	920	10	0 0 per ton	4 2 2
8	Screw bolts at Joints .....	..	8.33	0	0 4 per lb.	0 2 9
8	Fangs for do. ....	..	8	0	0 4 do.	0 2 8
10	Spikes .....	..	8	0	0 4 do.	0 2 8
2	Wrought Iron Chairs .....	..	12	10	0 0 per ton	0 1 1½
6	Sleepers	20.9½	..	0	5 6 each	1 13 0
36						6 4 4½

Number of Parts in a mile of single line..... 12,672

Cost of ditto, exclusive of labour in laying £2,171 8 0

PROPOSED BY MR. DOCKRAY.

No.	Description.	Cubic Feet.	Weight.	Rate.		
				£	s. d.	£ s. d.
2	Rails (100lbs. per yard) .....	..	1,000	10	0 0 per ton	4 9 3
8	Screw bolts at joints .....	..	..	..	..	0 2 9
8	Fangs for do. ....	..	..	..	..	0 2 8
10	Spikes .....	..	..	..	..	0 2 8
2	Wrought Iron Chairs .....	..	..	..	..	0 1 1½
6	Transverse Sleepers .....	..	..	0	5 6 each	1 13 0
2	Longitudinal do.	6.3	..	0	2 3 per foot	0 14 0
38						7 5 5½

Number of Parts in a mile of single line..... 13,376

Cost of ditto, exclusive of labour in laying £2,560 1 4

Cost of Maintenance of Permanent Way.—No. 194.

The following particulars embrace each variety of system adopted on various portions of the London and North Western Railway:—

On the Grand Junction division the Company contract with Mr. Allcard to maintain and reproduce the line and works for £165 per mile on the Junction and Chester lines, and £260 per mile on the Liverpool and Manchester. These contracts expire on the 18th November, 1852. Under this system, the annual cost for maintenance has been as follows:—

	1				2		3		4		Number of Miles.	Amount per Mile, Column No. 1.	Amount per Mile, Column No. 4.
	Maintenance of Way and Works.				Extras, including all Materials.	Repairs to Station Buildings and Goods Machines.	Totals.						
	Contract.		Not Contract.										
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.		£	s. d.
1843	24,700	0 0	...		66	7 3	920	1 9	25,686	9 0	103 14	238	14
1844	24,700	0 0	...		251	16 1	1,471	6 0	26,423	2 1	103 14	240	9
1845	20,094	8 3	12,770	16 10	Includ- ing all materials but rails and chairs.		1,541	17 7	34,407	2 9	147 14	259	0
1846	26,162	15 0	8,132	10 9			4,832	3 8	39,127	9 5	147 14	232	10
1847	26,162	15 0	5,891	8 0			3,290	1 7	35,344	4 7	165 14	190	26
1848	26,162	15 0	5,989	0 7			2,677	0 1	34,828	15 8	165 14	193	0

On the London and Birmingham division there is, in the first place, a contract for ballasting and haulage, and loading and unloading of materials. This is in the hands of Mr. Madigan. The Company find the working stock, which amounts in value to about £33,000, and provide workshops and sheds, Mr. Madigan paying interest on the one and rent for the other. Mr. Madigan receives the following rates of payment:—

For haulage 3½d. per waggon per m.f.e.
 For loading and unloading materials, including ex- s. d.
 cavating ballast 2 6 per waggon.
 For screened gravel 5 0 ditto.
 For the use of a locomotive engine and 12 waggons,
 including wages and all expenses of working .. £4 10 0 per day;

and pays interest at 5 per cent. on the stock=£1,656 15s., and a rent of £310 per annum for the buildings.

In the second place, Mr. Cardus has a contract for the maintenance of the line from London to Birmingham, together with the Aylesbury, Bedford, and Leamington Branches, which includes all labour, ballast, slips, &c. at the following rates:—

Per mile per annum.
 London to Wolverton £165 0 0
 Wolverton to Birmingham 123 18 11
 Aylesbury Branch (single line) 69 19 6
 Bedford Branch..... 135 19 10
 Leamington Branch (single line) 62 3 8

And Mr. Brown contracts for the Peterborough Branch at the rate of £82 0s. 8d. per mile per annum.

The repairs of tunnels, bridges, and goods stations, as well as all turn tables and other station machinery, are extras. The repairs of the passenger station buildings are conducted under a separate management.

Under this system the cost of maintenance has been as follows:—

	1			2	3	4			5			No. of Miles.	Amount per Mile.	Amount per Mile.	
	Maintenance of Way and Work, exclusive of West London Line.			Deterioration of Tunnels & Extension Works.	Relaying Charge.	Repairs to Station Buildings and Goods Machines.			Totals.				Column No. 1.	Column No. 5.	
	£	s.	d.	£	£	£	s.	d.	£	s.	d.	£	s.	d.	
1843	43,028	14	4	2,000	Nil.	1,472	8	6	46,501	2	10	116	370	18	5
1844	44,074	13	11	3,000	..	1,233	8	3	48,308	2	11	116	379	19	11
1845	43,809	11	4	3,000	..	2,783	1	7	49,592	12	11	116	377	13	4
1846	39,942	13	8	3,000	..	4,625	8	3	47,568	1	11	1204	332	3	3
1847	37,576	0	0	3,000	5,000	6,010	19	8	51,586	19	8	168	223	13	4
1848	37,014	0	7	2,000	10,000	5,411	14	9	54,425	15	4	184	201	8	3

On the Manchester and Birmingham section, the repair of the road and stations has been in the hands of the Company since 1844. The cost has been as follows:—

	1			2	3	4			5			No. of Miles.	Amount per Mile.	Amount per Mile.	
	Maintenance of Way and Works.			Depreciation.	Relaying Charge.	Repairs to Station Buildings and Goods Machines.			Totals.				Column No. 1.	Column No. 5.	
	£	s.	d.	£	£	£	s.	d.	£	s.	d.		£	s.	d.
1844	2,502	4	0	Nil.	Nil.	289	12	10	2,881	16	10	31	80	14	4
1845	2,340	18	6	..	..	331	2	9	2,672	1	3	31	75	10	3
1846	2,412	16	11	..	..	988	4	8	3,401	1	7	31	77	16	8
1847	3,616	1	3	..	..	709	17	3	4,325	18	6	40	90	8	0
1848	3,358	4	1	..	..	1,044	18	3	4,403	2	4	40	83	19	0

On the Manchester and Birmingham section (40 miles), the repair of the road and stations is directed by Mr. Woodhouse, with the assistance of an overlooker, at £80 per annum. The total annual expense of the department is £210.

On the Southern division (now 186 miles double line), the repair is directed by Mr. Dockray, as resident engineer of the Company. Mr. Dockray is assisted by nine overlookers, two clerks of works, two storekeepers, three clerks, and one draughtsman. The total annual expense of the department is £1,387 4s. 8d., including travelling expenses, stationery, and other office expenses.

The repair of passenger station buildings is in the hands of Mr. Savill. The expense of the department is £120 per annum.

On the Grand Junction division, Mr. Norris superintends the repair of the road, works, and stations. He is assisted by one assistant engineer, one overlooker, one clerk, and one draughtsman. As Mr. Norris and his staff are also engaged in the superintendence of the traffic, it is difficult accurately to state the actual staff expenses chargeable to the permanent way department; these are, however, taken at £650 per annum.—*Captain Huish's Report on Permanent Way.*

Goods Traffic on the South Eastern Railway.—No. 195.

The following are particulars of the Goods Traffic for the year ending 31st January, 1846 :—

	Weight.				Amount.		
	Tons.cwts.qrs.lbs.				£	s.	d.
Grain	6,935	12	0	0	2,158	2	10
Fish	1,647	14	0	0	3,294	12	0
Fruit	3,138	19	0	0	2,095	18	2
Vegetables	1,014	8	0	0	516	12	0
Hops	6,242	15	0	0	5,381	17	0
Manure	4,966	15	0	0	1,857	7	0
Bricks, Chalk, Lime, Fullers' Earth, Cement, Timber	14,966	15	0	0	4,722	4	3
Porter, Spirits, and Wine	978	18	0	0	586	16	0
Furniture and Luggage	224	5	0	0	397	11	0
Wool	339	2	0	0	201	2	9
Meat	40	2	0	0	32	15	5
Stationery	266	13	0	0	132	10	9
Machinery	57	4	0	0	47	1	5
Groceries	8,304	0	0	0	3,114	2	8
Draperies	1,508	0	0	0	1,152	16	8
Bark, Hop-poles, Earthenware, Leather, Iron Castings, and Sundries	11,905	2	0	0	11,646	12	4
Coals	26,420	0	0	0	4,397	9	11
Totals	88,956	4	0	0	41,735	12	3

Railway Working Stock.—No. 196.

Statement showing comparative Stock of Waggon and other Vehicles used for Merchandise and Mineral Traffic belonging to the following Companies, on the 31st December, 1847 :—

LINE.	Goods Waggon.	Cattle Waggon.	Coal Waggon.	Miscellaneous.	Total.		Remarks.
					No.	Per Mile Worked.	
London and North Western	4,845	612	653	97	6,207	11½	* Can be used for Goods also.
Midland	3,600	300	2,500*	..	6,400	14½	
Eastern Counties	1,057	639	529	70	2,295	10	
Great Western	890	..	..	30	922	35-6
York and North Midland ..	861	..	826	34	1,721	9½	
York, Newcastle, & Berwick	1,591	..	9,798	..	11,788	74	
Edinburgh and Glasgow ..	917	917	13	
Lancashire and Yorkshire	3,000	3,000	15	

The Great Western waggons are of twice the capacity of those on the narrow gauge, and their merchandise traffic is one-third of the London and North Western Company.—*Captain Huish's Report on Working Stock.*

Railways Opened Yearly.—No. 197.

The following table shows the railways authorised previously to the end of 1843, and in each succeeding year; the proportion opened for traffic during each year; and the proportion remaining to be completed at the end of 1848; and also showing the length of railway opened for traffic in each year since 1843:—

		LENGTH OF LINE OPENED.						Total Length of Line opened to Dec. 31, 1848.	Length of Line authorised.	Length of Line remaining to be opened
		Previously to Dec. 31, 1843.	During 1844.	During 1845.	During 1846.	During 1847.	During 1848.			
		Miles	Miles	Miles	Miles	Mis.	Miles	Miles	Miles	Miles
Of Lines authorised previously to Dec.31, 1843 }		1,952	196	129	8	..	..	2,285	2,285	..
Of Lines authorised in 1844		..	..	158	365	140	121	784	805	21
..	.. 1845	..	..	6	222	556	618	1,402	2,700	1,298
..	.. 1846	..	..	..	..	84	398	482	4,538	4,056
..	.. 1847	..	..	..	..	..	54	54	1,354	1,300
..	.. 1848	..	..	..	..	..	..	..	330	330
Total		1,952	196	293	595	780	1,191	5,007	12,012	7,005

Stock Destroyed on the London and Birmingham Railway.

No. 198.

"The following return of the London and Birmingham Stock broken up seems, at first sight, large; but it will be seen that the bulk consists of second and third class carriages, which were so originally faulty in construction, from bad materials, as to form an exceptional case; and, even including this, the annual loss has been under £4,000.

"JUNE 10, 1848.

"STATEMENT, showing the number and cost of Carriages of all classes, and Trucks and Horse Boxes, broken up upon the Southern Division, and value of Materials remaining, from the opening of the Line, until 31st December, 1847:—

CLASS.	No.	Cost per Carriage.	Total.	Value of Old Materials.	Actual Loss.
1st Class	2	£ 420	£ 840	£ 140	£ 700
Ditto Mails	3	500	1,500	200	1,300
2nd and 3rd	142	100	14,200	3,550	10,650
Ditto	36	300	10,800	1,800	9,000
Trucks	70	100	7,000	1,250	5,750
Horse Boxes	70	150	10,500	1,500	9,000
	323	..	44,840	8,440	36,400

"J. WRIGHT."

Wearing Out of Permanent Way.—No. 199.

The following remarks are made by Captain Huish, in his Report on Permanent Way, showing the actual wear and tear on the London and Birmingham portion of the London and North Western Railway:—

It is therefore evident that both the Permanent Way contractors and the company suffer, if the road is not kept in high repair. In proof alike of this position, and of the naturally accelerating rate of waste in the old and more inefficient parts of the road, we give the following statement, showing the number of rails broken in each month since June, 1848, on the main line of the southern division:—

Rails broken in the month of	Southern Division.
June, 1848	1
July, "	2
August, "	1
September, "	2
October, "	4
November, "	3
December, "	1
January, 1849	5
February, "	8
Total	27

And again, the number of rails delivered to replace crushed, bent, laminated, and broken rails on the same line, in 1848, showed the following increase:—

	Southern Division. London and Birmingham Line.
Three Months ending March 31st, 1848	130
Three Months " June 30th, "	214
Three Months " Sept. 29th, "	280
Three Months " Dec. 31st, "	450

The consumption of keys upon the district between Rugby and Birmingham, where the rails are in good preservation, was, in 1848, 700 per mile; the consumption per mile upon the district between King's Langley and Wolverton, where the road is in a worse state, was, in the same period, 1807 per mile; and similar results apply to all the materials employed.

The value of *new* materials put into the road, and charged to revenue, on the line from London to Birmingham, has been, in—

Year.	Rails.	Chairs.	Sleepers.	Spikes and Keys.	Delivery of Materials and Ballast.	Total.
	£	£	£	£	£	£
1846	252	277	1,839	1,210	1,096	4,674
1847	633	330	2,037	1,688	957	5,645
1848	667	109	3,342	1,845	1,525	7,498
	*1,552	716	7,218	4,743	†3,578	17,807

* The rails in this statement are not all new, but include the best rails selected from those removed from the road in the process of relaying, which are charged at the price at which relaying is credited for the old rails.

† This sum is less the amount charged by the Company to the Contractors who maintain the permanent way.

Bonded Goods in Manchester.—No. 200.

The following statement shows the quantity and description of goods bonded in Manchester in 1847 and 1848, and also the Customs' receipts from 1846 to 1849:—

	Tea.	Coffee.	Wine.	Brandy.	Rum.	Gin.	Sugar.	Cur-	Tobacco.	Cigars.
Year.	lbs.	lbs.	Galls.	Galls.	Galls.	Gal.	Cwt.	rants.	lbs.	lbs.
1847	882,682	1,451,567	44,133	17,597	20,982	228	3,892	1,909	48,098	2,291
1848	993,908	1,795,248	49,780	20,943	43,205	685	11,582	904	390,735	4,396
	110,226	341,681	5,647	3,346	22,223	457	7,760	1,095	342,637	2,105
	Incr.	Increase.	Incr.	Increase	Incr.	Inc.	Incr.	Deer.	Increase	Incr.

MANCHESTER CUSTOMS' RECEIPTS.

For the year ending 5th January, 1846	£ 70,319
Ditto 5th January, 1847	£187,920
Ditto 5th January, 1848	£177,417
Ditto 5th January, 1849	£249,668

Canals of America.—No. 201.**MAINE.**

The Cumberland and Oxford Canal unites Sebago pond with Portland Harbour: length of excavation 20½ miles, affording a navigation, natural and artificial, of 50 miles.

VERMONT.

The Bellows Fall Canal, half a mile in length, overcomes a fall of fifty feet by nine locks.—The White River Canal and Waterqueechy Canal, in Hartland, are similar works.

MASSACHUSETTS.

Middlesex Canal reaches from Merrimack, at Chelmsford, to Boston: length, 26 miles.—Blackstone Canal extends from Worcester to Providence, 45 miles.—Hampshire and Hampden Canal is the continuation of the Farmington Canal, from Southwick to Northampton, 20 miles.—Pawtucket Canal, at Lowell; Montague Canal, at Montague; and South Hadley Canal, are short cuts passing round fall in the Merrimack and Connecticut.

RHODE ISLAND.

Blackstone Canal, extending from Providence to Worcester, is partly in this state and partly in Massachusetts.

NEW YORK.

Erie Canal extends from Buffalo, on Lake Erie, to Albany, on the Hudson, 363 miles; rise and fall, 698 feet; locks, 84.—Champlain Canal extends from Whitehall to Albany, 72 miles.—Oswego Canal extends from Salina, on the Erie Canal, to Oswego, on Lake Ontario, 38 miles.—Cayuga and Seneca Canal extends from Geneva, on Seneca Lake, to Montezuma, on the Erie Canal, 20 miles.—Crooked Lake Canal connects that lake with Seneca Lake, 7 miles.—Chemung Canal extends from Elmira, on the river Chemung or Tioga, to Seneca Lake, 18 miles, with a navigable feeder from Painted Post, 13 miles.—Chenango Canal extends

from Utica, on the Erie Canal, to the Susquehanna, at the mouth of the river Chenango, 93 miles.—Black River Canal extends from Rome, on the Erie Canal, to Carthage, on Black River, 76 miles. These canals have all been constructed by the state, making a total of 700 miles. A survey for a sloop canal, from the Hudson to Lake Ontario, has been ordered by the legislature.—The Hudson and Delaware Canal extends from the Hudson, near Kingstown, to the mouth of the Lackawaxen, 83 miles, whence it is continued up the Lackawaxen, in Pennsylvania, 25 miles, to Honesdale.

NEW JERSEY.

The Morris Canal extends from Jersey city, on the Hudson, by Newark and Paterson, to the Delaware, at Phillipsburg, 100 miles: the principal elevations are passed by inclined planes.—The Delaware and Ranton Canal is adapted for small state vessels, and extends from New Brunswick, on the Ranton, through Trenton, to Bordentown, on the Delaware, 42 miles, with a navigable feeder from Bull's Island, in the Delaware, to the Main Canal at Trenton, 23 miles.

PENNSYLVANIA.

The Pennsylvania Canal includes a series of canals and railroads, constructed by the state. The Delaware division extends along the Delaware, from Easton to Bristol, 60 miles; the main trunk, from the termination of the railway at Columbia up the Susquehanna to the mouth of the Juniatta, and up that river to Holidaysburg, 172 miles. The Alleghany Mountain is passed by the Portage Railroad, from Holidaysburg to Johnstown, whence the canal is continued down the valleys of the Conemaugh and Alleghany rivers to Pittsburg, 104 miles, making the distance from Philadelphia to Pittsburg, by railway and canal, 394 miles. Susquehanna and North Branch division, from the mouth of the Juniatta to that of Lacawannock Creek, in the North Branch, 114 miles. West Branch division, from its junction with the North Branch to the base of the Alleghany Mountain, above Bald Eagle Creek, 72 miles, or, with side cuts, 76 miles of navigation. Beaver division, from the Ohio up the Beaver Creek, 25 miles. French Creek division, from Franklin, on the Alleghany, up the French Creek, 22½ miles, or, including the French Creek feeder, 46 miles; making 600 miles of canal constructed by the state. It is proposed to connect the Beaver division with the Ohio Canal at Akron, and the French Creek division with Lake Erie at Erie.—Private works are the Lackawaxen Canal, extending up the Lackawaxen to Honesdale, 25 miles, and being a continuation of the Hudson and Delaware Canal.—The Lehigh Canal, from the Morris Canal, on the Delaware, up the Lehigh, 46½ miles.—The Schuylkill Canal, from Philadelphia to Port Carbon, 110 miles.—The Union Canal, connecting the Schuylkill Canal, near Reading, with the Pennsylvania Canal, at the mouth of the Swatara, 80 miles, with a navigable feeder down the Swatara of 24 miles.—The Conestoga Canal, from Lancaster to the mouth of the Conestoga, is 18 miles in length.—The Codorus Canal extends from York down the Codorus to the Susquehanna. Length of canals in Pennsylvania, 900 miles.

DELAWARE.

The Chesapeake and Delaware Canal lies chiefly in Delaware; it is 13½ miles in length, and navigable by sloops, being 10 feet deep and 66 feet broad.

MARYLAND.

Port Deposit Canal, 10 miles, extends from the boundary line to Port Deposit, along a line of rapids.—Chesapeake and Ohio Canal, beginning at Georgetown and extending up the valley of the Potomac, is principally in Maryland: it is completed

to a few miles above Williamsport, 100 miles from Georgetown: the projected length to the Ohio at Pittsfield is 340 miles: the Alleghany Mountain is to be passed by a tunnel four miles in length.

VIRGINIA.

Dismal Swamp Canal, partly in North Carolina, connects the waters of the Chesapeake with Albemarle Sound, 22½ miles.—The James River Canal extends from Richmond 30½ miles; with this, the Blue Ridge Canal, seven miles in length, and some other short cuts, the navigation of James River into the valley is effected.—The Roanoke Navigation is a series of cuts, locks, and sluices, rendering the river navigable from Weldon, in North Carolina, to Salem in the valley, 244 miles.

NORTH CAROLINA.

The Dismal Swamp Canal is partly in this state and partly in Virginia: the North-West Canal, six miles in length, is a branch of this work.—Weldon Canal passes round falls in the Roanoke 12 miles.

SOUTH CAROLINA.

The Santee Canal, 22 miles in length, connects the Santee with the Cooper River, which enters the sea at Charleston harbour.—The Wingaw Canal, of 10 miles, was commenced, but is given up.—Columbia, Camden, and other canals, have been constructed round the falls of the Saluda, Wateree Pedee, and Broad Rivers.

GEORGIA.

The Savannah and Ogeechee Canal extends from Savannah to the Ogeechee, 16 miles; it is to be continued to the mouth of the Oconee, in the Altamaha, 80 miles.

FLORIDA.

It has for some time been considered a desirable object to form an inland communication between the gulf of Mexico and the Atlantic Ocean, by a canal across the peninsula of Florida. Such a work would enable vessels to avoid the dangerous navigation among the Bahama Islands, and round the southern point of the peninsula. Several routes have been surveyed, from the St. Mary's to the mouth of the Appalachicola and the Suwanee, and from the St. John's to the Suwanee and to Hillsborough Bay.

ALABAMA.

The Mussel Shoals Canal will extend from Florence, at the head of steam boat navigation in the Tennessee, to a point above the Shoals, whence the Tennessee and Holston may be ascended to Knoxville, 700 miles from the mouth of the former river.

LOUISIANA.

Carondelet Canal is a short cut, admitting small sea vessels, from lake Pontchartrain into a basin in the rear of New Orleans. The New Orleans and Teche Canal, from that city to the Atchafalaya, near the mouth of the Teche, is about 100 miles in length.

KENTUCKY.

The Louisville and Portland Canal, passing the falls in the Ohio below Louisville, is above two miles in length and 200 feet wide at the top: it overcomes a fall of 24 feet, and admits steam vessels of the largest size.

ILLINOIS.

It is proposed to construct a canal from Chicago, on Lake Michigan, to the mouth of the Vermillion, in the Illinois, a distance of 96 miles.

OHIO.

The Ohio Canal extends from Portsmouth up the Scioto, a little below Columbus, thence through Newark to the Muskingum, at Coshocton; up that river and down the Cuyahoga to Cleveland, 316 miles; with navigable feeders to Columbus, 11 miles, and Granville, 6 miles, &c., and a lateral canal of 9 miles to Lancaster; total length 341 miles. The Miami Canal extends from Cincinnati to the Miami, near Hamilton, up the valley of the Miami to Dayton, 66 miles. It is to be continued to the Muamee, at Defiance, and down that river below the rapids. The Wabash and Muamee Canal will terminate in this state. It is probable that the Ohio and Pennsylvania Canals will be united by a Canal extending from Akron, on the former, to the Beaver division of the latter, a distance of about 110 miles.

INDIANA.

The Wabash and Erie Canal, to extend from the mouth of the Tippecanoe to below the rapids of Muamee, at Fort Meigs, in Ohio, a distance of 200 miles, is in progress; 130 miles of the route is within the limits of Indiana.

UPPER CANADA.

The Welland Canal forms a communication, by lake vessels of 120 tons, between lakes Erie and Ontario. It is 41 miles in length, 56 feet wide, and 8½ feet deep; summit level 330 feet. The Rideau Canal extends, in a circuitous course, from Lake Ontario, at Kingston, down the Rideau to Hull; the excavation is 20 miles, but the whole navigation 160; lockage, 437 feet; 47 locks.

BRITISH AMERICA.—UPPER CANADA.

There are two canals in this province: the Rideau Canal extends from Lake Ontario, at Kingston, down the Rideau to the Attawa; the whole distance is 160 miles, but the actual excavation does not exceed 20.—The Welland Canal passes from Lake Erie to Lake Ontario; length, 41 miles; depth, 8½ feet; width, 56 feet; of dimensions, therefore, to admit lake vessels.

Rating of Railways.—No. 202.

When railway dividends were reduced, efforts were made to reduce expenditure, and amongst other things rates and taxes. On this subject Mr. Laing, in a pamphlet published in 1849, said:—

“In the case of the London and North Western Railway, it appeared, by a return made to Parliament, that the land occupied by the railway in the six counties of Middlesex, Hertford, Bucks, Northampton, Warwick, and Worcester, was previously assessed at an annual value of £2,445, and contributed the 150th part of the total rates of the parishes in which it was situated. The same land appropriated to the purposes of the railway was assessed at £128,007, and paid one-third of the total rates of the parishes.

“The Brighton Railway passes through sixteen agricultural parishes between London and Brighton, the united acreage of which is 86,508 acres. Of this the railway occupies 693 acres, in respect of which occupation it pays about £10,000 a year, or £14 per acre per annum, being one-third of the total rates of these parishes. In one extreme case, that of the parish of Coulsdon, the Brighton and South Eastern Railway Companies occupy together fifty-three acres of poor

agricultural land, out of 4,200 acres in the parish, and pay rather more than seventy-five per cent, or three-fourths of the whole rates."

Further on, Mr. Laing, speaking of the proceedings of the Court of Queen's Bench in the case of the Great Western Railway Company, remarked:—

"The question which Lord Denman felt himself precluded from answering is one which to some railway companies would make a difference of £20,000 a year in the amount of their rates. It is not too much to say that, if this question could be raised before some proper tribunal, and brought to a final adjudication, the market value of the existing railway property of the kingdom would be affected to the extent of £1,000,000 by the result."

The following was a striking case in point:—

"The inhabitants of the parish, who make the rate in the first instance at their vestry meeting, are *parties to the suit*, and every man present has a direct pecuniary interest in making the rate on the railway as high as possible. I know an instance of two adjoining parishes in Hertfordshire, in both of which the rates were formerly 9s. in the pound. One of them has been fortunate enough to have a little angle of its land intersected by the London and Birmingham Railway; while the other is tantalised by the sight of the line running for some distance within one hundred yards of its boundary, without actually touching it. The consequence is, that in the lucky parish of North Church they have got their rates down, at the expense of the railway, to 1s. 6d. in the pound; while their less fortunate neighbours in Wiggington are still rated at 7s. 1."

The pamphlet stated one or two other considerations against the excessive assessment of property which brings no burthen on the local rates, and Mr. Laing went on to remark:—

"One thing is perfectly clear, that in attempting to apply the ordinary law of rating to the case of railways, the Court of Queen's Bench have practically arrived at a result by which profits of trade are made the subject of assessment.

"As the law stands at present, under the decisions above referred to, a railway company whose annual receipts are £200,000 and expenses £100,000, and which has a working stock worth £200,000, upon which twenty-five per cent. is allowed for depreciation and tenants' profits, will be rated upon a rental of £50,000 a year. If, in the course of the next twelve months, by a better adjustment of its trains and fares, it raises its receipts to £225,000—while at the same time, by closer attention to economy, it reduces its expenses to £75,000—it will be assessed upon £100,000 a year, instead of £50,000. In other words, it will have to pay rates upon every penny of additional income which has been earned by substituting frugality for extravagance, and good for bad management. On the same principle, a trader or manufacturer would be assessed in precise proportion to the profit which, with a given amount of capital invested in moveable machinery, he had realised from his trade in the course of the year. This is so obvious that a very general opinion is entertained in the legal profession that the principle of railway rating laid down by the Court of Queen's Bench would be reversed, as leading to a distinct violation of the principle that profits of trade are not rateable, if an appeal lay to the Exchequer Chamber."

Railway Promises versus Performances.—No. 203.

There are few cases on record in which so many persons have been bewildered and suffered by the glittering predictions so plentifully bestowed on the proprietors of railways, and the results of which have been so much at variance. I recollect Mr. Glyn, M.P., the chairman of the London and North Western Railway, was blamed some years since for honestly telling the proprietors that he was not certain they could always maintain a 10 per cent dividend. Had every railway director been equally candid we should not have had to deplore the disasters that have followed.

MIDLAND RAILWAY.

At the half-yearly meeting of the Midland Railway, 19th January, 1846, Mr. Hudson, the chairman, remarked:—

"They must look at this property of £8,000,000 or £9,000,000 as they would look at a sound commercial enterprise, and not be deterred from protecting and increasing that property by any reasonable risk that it might be necessary to encounter. Arrangements might perhaps be made in respect of some of these lines," (referring to the schemes for new lines for which Parliamentary sanction was about to be sought in the succeeding session), "but he would repeat that the directors could not, under existing circumstances, recommend the abandonment of any of them. He hoped that Parliament would sanction, if not all, at least the greater portion of them, and that, ere long, the dividend of the Midland Company would be a 10 per cent. one. (Applause)."—*Railway Record*.

At the same meeting, Mr. Hudson spoke in reference to these schemes as follows:—

"Gentlemen, in selecting the lines which I have now the honour to submit, two great principles guided us—the first, whether or not the construction of any given line would be advantageous to the country; and, second, whether the Midland Company ought to make it. We are not deterred from our purpose by what has recently occurred in connection with new schemes. We felt that your property possessed far greater stability; and it was to continue, and increase that stability, that we projected these lines, believing them to be beneficial to the community, and productive as well as protective to yourselves."

At the same meeting, "a proprietor thought the company had better finish the lines in hand, before they undertook so extensive a scheme.—(Laughter). Should the company get involved in four millions of debt, it would be a very serious matter.—(Renewed Laughter)."—*Railway Record*.

With regard to the Leeds and Bradford lease at 10 per cent. in perpetuity, Mr. Hudson, at the July meeting of 1846, said:—

"Gentlemen, I repeat that I shall be most happy to be lessee under you—to give any security you like—and to take all the risk if I am to get all the profit. I cannot say more to prove to you how highly I think of the line; and with these views, and

believing that not only will it pay of itself, but prove, in the highest degree, protective of your interests. I beg leave to move this resolution, sanctioning the proposed arrangement."—*Railway Record*.

"I am proud to say that I have never yet recommended a course of policy that has not proved eminently successful. I defy any person to shew to the contrary."

In 1849 we find a Committee of Investigation is appointed, and a greatly reduced dividend declared.

EASTERN COUNTIES RAILWAY.

At a special meeting, October 30th, 1845—the first at which Mr. Hudson presided—he said,—

"Gentlemen,—I am now sufficiently acquainted with the position of this Company to feel confident in assuring you that there is no line in the kingdom which should yield a better dividend than the Eastern Counties Railway.

"It will be one of the best means of investment connected with the Railway system of this country."

At the conclusion of the report of this speech, the editor of the "*Railway Times*" of 1st November, 1845, makes the following comment :—

"The honourable gentleman sat down amidst loud and long-continued cheering, with waving of hats, handkerchiefs, &c. In fact, the whole proceedings were accompanied with such enthusiastic applause, that they appeared more like those of a meeting of the friends of some successful candidate for Parliamentary honours, than the matter of business proceedings at a Railway meeting."

And the following remarks upon this speech in a leading article of the "*Railway Times*" of the 1st November, 1845, may be accepted as evidence of the interpretation generally put upon it at the time :—

"Hence arises his" (Mr. Hudson's) "extraordinary success, and the devotion with which his views and opinions are followed! That he should, as his last prophecy on record, predict a success to the Eastern Counties lines to be such that the shareholders are sure to receive, ere long, 10 per cent. per annum for the entire partnership-capital embarked, does not surprise us."

In April, 1849, the following remarks are made :—

The *Morning Herald* states that some differences of opinion among the members of the Committee of Investigation appointed by the shareholders of the Eastern Counties Railway Company may delay the publication of their report for a short period. "We have good reason for believing that the evidence laid before the Committee shews, to a very serious extent, the payment out of capital of sums that should have been charged to revenue. It is stated to us that during the last three years upwards of £150,000 have been carried to the capital account, a large proportion of which should, most unquestionably, have been paid out of the current traffic receipts. For instance, it is stated that some of the coke consumed by the locomotives employed in working the ordinary trade of the Railway, and that the clothing of the guards, &c. have been charged to capital." Mr. Hudson has been examined at length by the Committee, relative to the financial affairs of

that Company. It was impossible for his ex-majesty to refuse obedience to the summons of the Committee, because he had taken the financial department entirely under his own control. A most graphic account has been given of what took place while Mr. Hudson was under examination, "but no description on paper (says the writer) could give you any adequate idea of the affair." The Chairman of the Committee is Mr. William Cash, a member of the Society of Friends. Never since his accession to his iron throne was the member for Sunderland treated with so little ceremony. "George Hudson," said Mr. Cash, "wilt thou take a seat? As thou hadst the financial department of this Company under thy special control, thou art required to answer a few questions which the Committee will put to thee. Didst thou ever, after the accountant had made up the half-yearly accounts, alter any of the figures?" Mr. Hudson, in a subdued tone, answered, after a moment's hesitation, "Well, I may perhaps have added a thousand or two to the next account." "Didst thou ever add £10,000?" continued Mr. Cash. "Ten thousand! that is a large sum." "It is a large sum, and that is the reason why I put the question to thee. Wilt thou give the Committee an answer—yea or nay?" Mr. Hudson, in a very subdued tone, and evidently much embarrassed, replied, "I cannot exactly say what may have been the largest sum I carried to the following account." "Perhaps, George Hudson, thou couldst inform the Committee whether thou ever carried to the next account so large a sum as £40,000?" "Oh, I should think not so large a sum as that!" "But art thou quite sure thou never didst?" Here again the quondam monarch of the Railway kingdom shewed considerable hesitation and embarrassment, on which his Quaker inquisitor did not further press the question; and putting the questions, drawn upon a sheet of paper, into his hand, observed with a dry nonchalance which must have been very annoying to the quondam Chairman of the Company, "George Hudson, take the questions home with thee, and send written answers to the Committee at thy earliest convenience!" Never, it is said, was there so marked a change, in so short a time, in the manners and appearance of a man. Formerly even his colleagues in the Directorship were afraid to speak to him; but now he is all humility, mildness, and docility—willing to answer any question, and to do anything he is asked.

YORK AND NORTH MIDLAND RAILWAY.

Mr. Hudson, at a half-yearly meeting, 5th August, 1845, said:—

"We may congratulate ourselves, that, during the present session, we have added 64 miles to our Railway—(cheers);—and have thus extended our means of paying you your dividend. There is no doubt that we shall be enabled to add a considerable extent of country next session of Parliament."

And at a half-yearly meeting, August, 1847, when 10 per cent. dividend was declared:—

"Gentlemen,—It is not for us to estimate precisely the effect which the opening of these lines" (alluding to the extensions of the York and North Midland Railway then about to come into operation) "will have on the parent undertaking; but if the traffic should realise the expectations of the Directors, I hope we shall be able at our next meeting to declare the same amount of dividend as we have the pleasure of submitting to you to-day. At the same time, I will not disguise from you that there may possibly be a diminution of our dividend for the next half-year;

but I entertain not the slightest doubt that, in the following year, you will receive not only your accustomed 10 per cent., but also some compensation for any deficiency that may in the interim arise. (Hear, hear, hear.)"

On the 6th September, 1849, we find a stormy meeting receives the Report of a Committee of Investigation, and no dividend.

YORK, NEWCASTLE, AND BERWICK RAILWAY.

At the latter end of 1846 a negotiation was on foot between the York and Newcastle, and North British Companies, for lease of the latter, when the York and Newcastle furnished a statement of their prospective profits in 1850, of which the following is the substance:—

Estimated gross receipts in 1850, viz.:—	Per Week.
York and Newcastle	£22,000
Newcastle and Berwick	5,000
Total	£27,000
Less,—working expenses, at the rate of about 27 per cent. on receipts	7,364
Estimated profit	£19,636

which amount was calculated as sufficient to produce a dividend of more than 10 per cent. per annum upon the whole capital employed.

And at a meeting of the York and Newcastle Company, February, 1847, Mr. Hudson said,—

"Gentlemen,—I have gone very carefully into this matter, and I think I can adduce such figures as will satisfy you that, although our engagements are really heavy, we shall have heavy receipts to meet them. (Hear, hear, hear.) Gentlemen, I have never disguised from you that I think we paid for the Great North of England Railway an excessive price, and that the demand made upon us by that Company ought not to have been made. However, we had the courage to make the arrangement; and it is satisfactory to know that, after paying the rent, we have maintained our dividend of 9 per cent., and that there is a fair prospect of still maintaining it, not only on the present capital, but on any further amount that may be required for new lines. (Hear, hear.)"

Also, at the half-yearly meeting, August, 1847,—

"I assure you, gentlemen, it gives me very great pleasure to inform you that, what, on the occasion of our last meeting I ventured to anticipate as to the proceedings of the York and Newcastle Railway Company, has been most fully realised. (Applause.) I believe that my calculations have been verified in every part. (Hear, hear, hear.) I told you that I expected the surplus would be about £24,000 or £25,000; and so it is, after paying the guaranteed interest in respect of the Great North of England shares and your dividend. (Hear, hear, hear.) I anticipate a further improvement during the current half-year, and that we shall be able to pay 9 per cent., not only on the old shares, but on the new." (Applause.)

Ibid. "On the whole, gentlemen, I am quite satisfied that no Company has better prospects than this. (Hear, hear, hear.)"—*Railway Record*.

In the second Report of the Committee of Investigation of this Company, dated 12th July, 1849, we find, amongst other things, Mr. Hudson is charged with—

“Taking up and paying off the calls on 2,345 shares in the Sunderland Dock Company, over and above 3,000 shares authorised by the shareholders at a general meeting, with the Company's funds.

“The appropriation to himself of large surpluses of shares, with the profits and premiums thereon.

“The creation of 14,000 more shares than were made known to the shareholders, and the taking at different times for his own benefit of many thousand shares, then at high premiums, on the sale of which he made immense profits.

“The application of large sums to his own account, given him to pay other parties, for which there was no payment made, and some of which were paid by the Company during the time he held the money for paying them.”

And in “Herapath's Railway Journal” of the 15th September, 1849, is the following:—

MR. HUDSON'S PROFITS.—“The following items have been culled out of the five reports already published on the York and Berwick, and York and North Midland Railways, of Mr. Hudson's profits. They are not pretended to comprise the whole. The amount, it will be seen, is the trifling sum of £593,695, of which £168,787 has already been repaid. If such be the opportunities of gain, can we wonder at the desire and anxiety evinced to get into directions? There is not here included the £90,000 received from the Bank of England, nor the original Newcastle and the Scarborough surplus shares given him, together about £70,000.

“Money belonging to the Railways in Hudson's possession, and returned by him:—

Great North of England Purchase Account.....	£11,292	10	0
Returned on East and West Riding shares.....	16,000	0	0
Money belonging to landowners	26,000	0	0
Contractors	42,479	13	7
North British money	62,267	14	3
Iron rails	9,000	0	0
Money returned and paid by him	167,039	17	10
Interest on two Bonds, Bank of England	1,747	4	5
Total repaid.....	168,787	2	3
To PAY:—			
Sunderland Docks	41,000	0	0
Due on 2,075 East and West Riding shares, say	15,000	0	0
Profit on Berwick shares	145,704	0	0
Ditto Extension	4,000	0	0
Branding Junction	42,000	0	0
Iron rails	55,000	0	0
East and West Riding shares.....	60,000	0	0
Difference in iron	2,203	12	11
Hull and Selby Purchase shares, for which he has given his bill	42,000	0	0
Difference to return for his land at Londesborough.....	18,090	0	0
	£593,694	15	2

"We may here observe, that the arbitration on the sum Mr. Hudson ought to receive for the damage done by the two Railways passing through his Londenborough estate has been concluded, and £18,000 or £20,000 awarded as the full amount he was entitled to. He had received £38,000, and will therefore have to return £18,000 to £20,000 overpaid to him. Legal proceedings, we hear, have already been commenced against him for the recovery of large sums he has made out of, or by, the Railways."

Travelling Seventy Years Ago.—No. 204.

The following advertisements of "flying machines," extracted from *Aris's Birmingham Gazette* of the 11th November, 1765, will raise a smile in these days of express trains and electric telegraphs, and serve to indicate the progress which has been made in locomotion during the last sixty years:—" *Birmingham Flying Machine*, thro' Coventry, in one day and half, during the winter season, to carry four passengers only, sets out from the Castle and Faulcon, in Aldersgate Street, London, every Monday and Thursday, at four o'clock in the morning, and gets to the Dolphin Inn, in Birmingham, every Tuesday and Friday at noon; sets out from the Dolphin Inn, in Birmingham, every Monday and Thursday, at eight o'clock in the morning, and gets to London every Tuesday and Friday evenings. Each inside passenger to pay one guinea and half, one guinea earnest, the other half at entering the *Machine*: outside passengers, and children on lap, half price; to be allowed eight pounds weight for luggage; all above to pay twopence per pound. Perform'd, if God permit, by Thomas Jordan, Birmingham; Thomas Dullison, Coventry; John Mott, London. We will not be accountable for any cash, plate, writings, jewels, &c., unless entered as such, and paid for accordingly." "The Birmingham and Stratford Stage Coach goes twice a week in two days, for the winter season; sets out from the Swan Inn, in Birmingham, and from the Bull and Mouth Inn, in Bull and Mouth Street, London, every Monday and Thursday, at six o'clock in the morning. Both carriages meet at Woodstock that night, and return to London and Birmingham every Tuesday and Friday evening. Each inside passenger to pay one guinea, half-a-guinea entrance, and the other half at going into the coach; outside places, and children in lap, to pay half price. Each inside passenger allowed fourteen pounds weight for luggage, and all above to pay three halfpence per pound; over luggage to be paid for at getting into the coach. The *Fly* (in a day and a half) sets out from London every Tuesday and Friday, at four o'clock in the morning, and gets to the Swan, in Birmingham, every Wednesday and Saturday, at noon; and sets out from the Swan, in Birmingham, every Tuesday and Friday, at nine o'clock in the morning, and gets to London every Wednesday and Saturday evening. The carriages meet and lie at Chapel House. Each inside passenger to pay one guinea and a half, one guinea to be paid at entrance, and the other half-guinea at going into the *Fly*; and to be allowed eight pounds weight for luggage, and for all above to pay twopence per pound. Perform'd, if God permit, by John Payton, Stratford; Samuel Manning, London. N.B. They will not be answerable for money, plate, or valuable goods, unless booked as such, and paid for accordingly. Post chaises at ninenpence per mile; if three persons, one shilling."

Vessels entering Hull.—No. 205.

The following is a Statement of the Number and Tonnage of Vessels which Entered the Port of Hull from various Countries, distinguishing the Nations to which the Vessels belonged, in the Year 1847.

COUNTRIES.	BRITISH.		FOREIGN.	
	Ships.	Tons.	Ships.	Tons.
Russia, Northern Ports	381	78,047	96	17,070
Ports on the Black Sea	50	14,406	8	2,728
Sweden	23	3,738	238	40,152
Norway .....	..	..	37	4,110
Denmark	7	849	278	17,525
Prussia	47	6,677	198	33,798
Mecklenburg .....	..	..	16	1,576
Hanover .....	..	..	58	8,138
Oldenburg .....	..	..	13	668
Hanse Towns	118	44,416	174	33,608
Holland	144	29,691	137	11,907
Belgium	64	13,869	28	1,676
Channel Islands	3	189	..	..
France	47	3,530	15	1,684
Portugal	7	552	3	316
Azores	31	2,190	..	..
Spain	16	1,205	6	1,044
Tuscany	1	100	1	254
Papal Territories	1	85	..	..
Naples and Sicily	23	2,907	2	495
Austrian Territories	3	607	1	312
Malta	3	698	1	265
Greece	2	184	..	..
Turkish Dominions	7	894	1	550
Wallachia, &c.	1	94	1	316
Egypt	15	4,083	3	822
Africa, Western Coast	1	264	..	..
India, British Territory	7	3,227	..	..
Singapore	1	317	..	..
British North American Colonies	127	53,955	..	..
United States	13	6,278	2	550
Chili	3	989	..	..
Peru	5	2,361	..	..
Patagonia	4	1,511	..	..
Greenland and Davis' Straits	14	3,369	..	..
TOTAL	1,119	281,302	1,357	174,546

NATIONS TO WHICH THE VESSELS BELONGED.

	Ships.	Tons.		Ships.	Tons.
United Kingdom	1,119	281,302	Belgium	21	1,596
Russia	60	15,730	France	11	1,029
Sweden	213	26,271	Spain	1	104
Norway	150	23,121	Italian States	7	1,842
Denmark	281	18,334	United States	2	550
Prussia	132	26,276	Brazil	1	130
Germany	339	48,022			
Holland	139	11,543	TOTAL	2,476	455,850

British and North America Royal Mail Steam Ships.

No. 206.

During the year 1848 these unequalled vessels made forty-four voyages each way across the Atlantic, making in all eighty-eight, and carried 3,955 passengers, namely, 1,689 out and 2,266 home. The average length of passage from Liverpool to Halifax was twelve days and two-and-a-half hours. The longest was that of the *Britannia*, in March, eighteen-and-a-half days. The shortest passages were as follow:—

	Days.	Hrs.
Liverpool to Halifax, the <i>Europa</i> , in October	8	18
Liverpool to Boston, the <i>America</i> , in June	10	6
Liverpool to New York, the <i>Europa</i> , in October	10	23
Boston to Liverpool, the <i>Niagara</i> , in July	10	10
New York to Liverpool, the <i>America</i> , in November	11	11

The *America* made the best running outwards of the four new boats, her average passage to Halifax having been ten days two-and-a-half hours; *Europa's*, ten days four-and-a-quarter hours; *Niagara's*, ten days four-and-three-quarter hours. The *Canada* made but one passage out.—*Halifax Chronicle*, April, 1849.

Cost of Railway Stations.—No. 207.

Mr. Ricardo, M.P., made the following remarks at a meeting of the North Staffordshire Railway, 31st January, 1849:—

“The first line he would take as a comparison was the Northampton and Peterborough Railway: it was not a very first-rate line, but was a fair specimen. The erection of stations on the Peterborough line cost £1,300 a mile, and they averaged five miles apart. The average distance of the stations was a great element in the comparison. On the Peterborough line, with an average distance of five miles, the stations cost £1,300 a mile. On the Chester line they averaged 5½ miles apart, and cost £1,700 a mile. On the Lancaster and Carlisle they averaged 5½ miles apart, and cost £1,560 a mile. On the Trent Valley Railway, into which the North Staffordshire lines ran, the stations cost £1,720 a mile, and they averaged 5 miles apart. The stations of the North Midland Railway cost £2,250 a mile, and they averaged 5 miles apart. The stations on the North Staffordshire Railway, averaging 4 miles apart, only cost £1,300 a mile. (Hear, hear, and applause.) He was here stating positive facts. What he had stated could be proved from the books of the Companies themselves; and he pledged his word, that the statements he had read were to be depended on. Here, then, was an important fact. On their own line the stations, averaging four miles apart, being more numerous than those of any other, only cost £1,300 a mile, which was less than any of the lines he had mentioned. It did not exceed the expenditure of the Peterborough line, where the stations averaged five miles apart. (Hear, hear.) He would now come to the station in which they were then met [the Stoke station]. The dissatisfaction which existed with regard to this station, he believed to be very great. Shareholders, in looking up to the windows, imagined themselves all going to ruin, because they were cased with stone, and rather ornamental in their appearance. (Laughter.) This was a fact; but he hoped to calm their fears in that respect. All he asked for, was fair play and credit for the

statements he should make. If any one doubted the statements, they would be allowed to inspect the books, in order to satisfy themselves of their correctness. Now the Cambridge station, which is entirely a local station, cost £30,000; the Chester station cost £45,000; and the Peterborough station cost £90,000. The Stoke station only cost £30,000. (Hear, hear.) Particularly he called attention to the fact, that the Cambridge, Peterborough, and Chester stations were simply for passengers and traffic; while the Stoke station was one in which not only the traffic of the Railway and Canal (amounting to 250 miles in length), but also the business of the executive, was carried on. The secretary and his clerks were accommodated there; in fact, every office was carried on in the building where they were then assembled. The rent which was paid for the building in London, where the executive was formerly located, amounted to £600 per annum. This would give them a capital of about £12,000; and if they deducted this sum from the other portions of the building, so as to make it on a par with others, the actual cost of the station was only £18,000, or something like half of what the lowest had paid. (Hear, hear.) He would go into further particulars, and state to them the saving which might have been effected. The only thing which they could have saved in that station (for there was not a room which was not occupied, and he believed that there were complaints that there was not room enough) the only possible saving they could have effected, supposing they had built the plainest building imaginable, would have been the stone work,—all those beautiful ornaments about which so much noise had been made. He had been at some trouble to ascertain the cost of these, and he found it amounted to £2,758. (Loud cries of 'Hear, hear.') But they must bear in mind there was something to be deducted from this sum. If they had not had stone, they must have had something else—brick or wood. They must deduct £500 for the bricks that would have been substituted, and they must make a further deduction for the stone that could not have been dispensed with; for there must be copings and cills to the windows, and these would have cost £700. Deducting, therefore, £1,200 from £2,758, there would remain £1,558 as the price of the ornaments, which they might have saved by making the station one of the ugliest in England."

Wolverton in 1849.—No. 208.

Upwards of 7,000,000 travellers are annually draughted through Wolverton northward, but they have no opportunity of noticing or knowing, as the trains stop only a few minutes, the rising Railway town, consisting of a series of compact rows of red brick cottages, and forming a complete colony of handicraftsmen and mechanics. A few years ago it was an unmarked spot upon the map, nothing but ploughed and pasture land, bleak, and almost without an inhabitant. Though it stands low and on the banks of the Grand Junction Canal, it is considered very healthy; but it is a remarkable fact, and one that has baffled the inquiries of the sanitarians of the town, that the mortality amongst the children is greater than that of any other town in the kingdom. A sum of £1,500 is disbursed here weekly in wages, and the Company's total stock of engines is 300, which, at £1,500 each, represents a capital invested in locomotives of something like half a million. A sum of £2,500 has been voted by the Directors for the establishment of a mechanic's institution about to be constructed, together with baths and wash-houses on the metropolitan principle.

• **Dog Travelling by Railway.**—No. 209.

The "Derby Mercury," in August, 1849, relates the following singular anecdote:—

"A terrier dog having been accustomed to travel with his master by Rail from Matlock to Matlock Bridge station, took it into his head to start Railway traveller on his own account. Now, Master 'Spot' had a little acquaintance of his own species near the bridge, to whom he was accustomed to pay frequent visits, and finding walking, or rather running, somewhat fatiguing, he adopted Rail travelling by preference, and has gone by himself, sometimes once a day, from one station to the other, invariably coming back by the return train, and never once making a mistake by taking the express train, which does not stop at Matlock Bridge station."

North Staffordshire and North Western Railway.—No. 210.

At a meeting of the North Staffordshire Railway Company, 31st January, 1849, the Chairman, Mr. Ricardo, M.P., gave the following explanation of the arrangement between their Company and the London and North Western Company:—

"Now, they must recollect, that, when first the line was brought forward, it was under the sanction and patronage of the London and Birmingham Company. They had obtained the use of the Trent Valley line, and, by the two Railways, they could find their way to Manchester without the aid of the Grand Junction at all. When they (the Directors of the North Staffordshire) first heard of the contemplated amalgamation of the Companies, they agreed that it would be well that a clause should be put in, so that they ought not to be thrown overboard. He and their solicitor, Mr. Birchall, had an interview with Mr. Glyn and his solicitor. The result was, an agreement drawn up by Mr. Glyn's solicitor; and, said the honourable gentleman, 'Here it is.' (Applause.) It was as follows:—'It is understood between the undersigned, that the North Staffordshire Railway Company are to have every reasonable facility for the transmission of their traffic over the united London and Birmingham, Grand Junction, and Manchester and Birmingham Railways; and that such mentioned Companies shall use the North Staffordshire line for the transmission of their direct Manchester traffic, and shall have the like facilities afforded to them for the transmission of such traffic; and that any misunderstanding as to the effect of this memorandum shall be left to arbitration. It is also further understood that each Company shall charge its tollage and mileage rates to the other. It is further understood that the expression 'direct' is intended to apply to the distances between station and station.—Signed, G. C. Glyn, J. L. Ricardo.' (Loud applause.) He felt perfectly satisfied himself as to that document; and he could not believe for one moment Mr. Glyn, or any one else, would, as soon as this line was opened, put any difficulty in the way of carrying out an agreement like that. In the course of six months they should be able to take the whole of the direct traffic over their line; and, taking the whole of the facts into consideration, he could not see by what pretext, either in law or reason, the agreement could be rendered void; he did not see the slightest difficulty in the way of their having the whole of their through traffic carried over their line."

Vessels Entered and Cleared at Liverpool.—No. 211.

The following is a Statement of the Number and Tonnage of Vessels which Entered and Cleared at the Port of Liverpool, from and to various Countries, during the Year 1847.

COUNTRIES.	INWARDS				OUTWARDS			
	BRITISH.		FOREIGN.		BRITISH.		FOREIGN.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Europe generally.....	816	116,758	638	115,484	1,103	162,291	707	130,055
Africa.....	208	56,081	8	1,371	141	43,252	9	1,772
Asia.....	226	98,390	..	....	234	104,751	17	7,976
AMERICA, viz.—								
British Northern Colonies	498	236,150	1	668	605	268,755	4	428
" West Indies.....	186	44,121	..	....	179	49,799	..	....
Foreign West Indies	87	19,346	26	5,589	77	18,682	66	14,130
United States	497	289,021	685	416,960	846	221,249	636	409,479
South American States	321	90,903	8	1,629	304	97,682	33	7,587
TOTAL	2,799	950,770	1,366	541,701	2,989	966,461	1,492	571,677
Iales of Guernsey and Jersey	43	2,990	..	....	47	3,865	..	....
Irish Trade	2,781	630,101	..	....	3,824	641,455	..	....
Other Coastiers (including Isles of Man Trade).....	5,101	568,625	..	....	6,210	626,019	..	....
TOTAL	10,723	2,142,486	1,366	541,701	13,070	2,287,800	1,492	571,677

The Leicester Coal Fields.—No. 212.

These fields (from which the county of Rutland, Stamford, Peterborough, and the neighbourhood will, on the opening of the Railway now in course of construction, derive their principal supply of coals) extend under a surface in that county alone, of upwards of 35,000 acres, viz., from Lount in the north to Bagworth (and probably further) in the south, and from Coleorton and Whitwick in the east to Oakthorpe and Swepstone in the west, and there is little doubt that they unite with the Derbyshire and Warwickshire fields. Nearly the whole of these coals are accessible for getting; and it has been calculated that if 150,000 tons are dug annually, it will take 10,000 years to exhaust them. There is, therefore, no fear of any deficiency for many generations to come. The Derbyshire coal, from Clay Cross, near Chesterfield, and other places, will be, immediately on the opening of the Railway to Peterborough, brought along the line. Stamford formerly was supplied with coals by sea and the river Welland, and by canal from Derbyshire; but since the opening of the Leicester and Swannington Railway, about 17 years since, the Derbyshire coal has in a great degree been supplanted by that of Leicestershire, and there is little doubt that sea coal will ere long be entirely superseded in the neighbourhood. Considerable quantities may also be expected from the Nottinghamshire pits by the Erewash Valley Railway to the Midland line.—*Nottingham Mercury*, March, 1848.

Railway Officers willing to give Information.—No. 213.

On this subject Mr. Scriviner remarks, in his work on Railways, in 1849,—

“I must here be allowed to acknowledge the courtesy and prompt attention received from the secretaries to the various Railway establishments generally, who have responded to the frequent calls upon their time and attention that I have had occasion to make, while occupied with this work, in the most handsome and efficient manner; nor has there been apparent, on the part of the Directors, the slightest desire to withhold or mystify any portion of the information sought after; on the contrary, they have shewn a ready disposition to meet my wishes on all subjects; and their communications to me have been distinguished by a frank and candid spirit, no less than by the distinctness of the statements made in them. For the many favours thus conferred I now offer them my cordial thanks. The secretaries have contributed much to the perfecting of this work; and I have great pleasure in noting their friendly services, and recording them here, in the hope this testimony may be received by them as an acknowledgment due from me, and in expectation it will be accepted by the public as evidence that no vexatious barriers are raised at the Railway Boards to hinder research or stifle inquiry; but that the official gentlemen connected with them are forward to help those who seek after information.”

Capital in Gas Works in 1849.—No. 214.

It is stated that no less a sum than £15,000,000 is already invested in gas works in the United Kingdom. The charges for the supply of gas vary very much, especially in the provinces.

Weight of Hops Grown

Below is an Account of the Total Number of Pounds Weight of United Kingdom, from the Year 1840 to the Year 1848, both

COLLECTIONS.	1840.	1841.	1842.	1843.	
Barnstaple.....	24	2,070	1,604	2,026	
Bath	6	170	.....	.....
Bedford	145	3,086	12,996	.....
Cambridge .....	.....	1,315	716	3,979	
Canterbury	1,201,530	7,087,518	6,661,547	6,269,669	
Chester .....	.....	.....	136	.....
Cornwall	313	187	833	50	
Derby	670	35,900	58,163	35,540	
Dorset	2,173	5,919	1,674	4,257	
Essex	3,752	107,345	148,284	133,976	
Exeter .....	.....	50	108	.....
Gloucester.....	2	2,108	1,058	143	
Grantham .....	.....	9,694	10,442	9,828	
Hants	214,274	994,853	1,319,614	592,569	
Hereford	33,015	1,801,138	3,121,634	1,450,341	
Hertford .....	.....	106,905	106,276	89,024	
Isle of Wight ..	67	601,828	1,105,731	381,392	
Lincoln	11,270	196,372	291,217	205,547	
Lynn	1,035	4,640	4,947	5,096	
Northampton ..	65	850	440	.....
Norwich.....	206	1,363	838	180	
Oxford .....	.....	4,922	8,890	12,316	
Plymouth	5	.....	.....	.....
Reading	63	2,503	3,366	5,848	
Rochester	4,853,684	10,745,981	12,278,889	8,442,352	
Salisbury	128,642	8,317	8,061	8,111	
Salop .....	.....	168	103	365	
Stourbridge	8,446	144,997	220,155	33,641	
Suffolk	3,732	95,413	172,739	104,520	
Surrey.....	181	3,391	3,944	637	
Sussex	642,978	7,948,570	9,091,138	9,308,131	
Wales Middle ..	35	6,346	3,753	2,566	
Wellington .....	.....	12,272	5,514	13,497	
Worcester.....	8,604	567,908	792,333	147,124	
York .....	.....	7	.....	.....
	7,114,917	30,504,106	35,432,142	27,862,725	

in England.—No. 215.

Hops charged with Duty, in each of the several Collections of the
inclusive:—

1844.	1845.	1846.	1847.	1848.
1,985	13,244	30,724	986	15,903
.....
.....	.....	85	.....	1,551
3,057	2,664	3,204	5,799	4,954
4,415,811	7,547,527	9,469,504	10,772,681	8,932,293
.....
321	495	1,151	188	313
31,202	12,946	70,169	2,329	30,773
2,788	1,188	.....	.....	.....
93,874	73,753	137,286	203,119	121,021
.....
1,381	2,410	14,174	217	13,441
4,594	6,122	28,091	935	7,086
1,266,691	691,899	2,162,346	533,984	1,745,532
2,873,492	1,377,699	5,890,812	256,354	2,550,411
64,323	87,115	27,108	35,083	227
833,940	438,629	1,062,362	914,499	927,633
124,164	67,187	419,505	41,510	208,194
1,321	1,279	6,023	6,882	.....
.....
.....
1,143	2 049	6,953	553	2,376
.....
287	691	7,254	2,223	7,862
13,294,266	10,744,981	15,357,904	20,663,189	15,327,172
1,932	1,638	11,980	2,330	3,073
733	.....	1,625	406	1,398
151,680	79,341	337,938	10 009	159,407
70,351	46,050	160,256	144,756	104,548
1,093	352	2,342	1,151	15,970
5,698,039	11,332,163	14,188,313	11,494,541	13,425,393
6,350	3,044	15,321	736	9,498
8,448	.....	.....	.....	.....
601,826	440,283	1,291,595	39,905	727,356
.....
29,285,092	32,974,749	50,704,025	45,134,365	44,343,985

Working Stock of the Lancashire and Yorkshire Railway.

No. 216.

The Committee of Proprietors of the Lancashire and Yorkshire Railway, in their Report of January, 1849, gave the following statement on the Working Stock, as furnished by Mr. E. Woods, of the London and North Western Railway, Liverpool:—

LOCOMOTIVE ENGINES.—The total number is 111, which includes two main divisions, viz.—42 of the older engines, which have run, on an average, about 168,000 miles each; 69 of newer and improved construction, which have run about 24,000 miles each. The former lot comprises—8 engines barely fit for work, used in ballasting, &c., and, perhaps, scarcely worth repairing; 19 engines of an inferior condition, working on branch lines, &c.; 15 engines in fair working order, and used chiefly on branch lines, not being powerful enough for the main lines. The second lot consists of engines, none of which have, as yet, run 70,000 miles, and some of which are quite new, manufactured by the Company—by Mr. Fairbairn and Mr. Bury—the individuals of each kind respectively being made almost uniform in pattern.

Original cost of 111 engines	£175,683
Present valuation of ditto	146,395

Depreciation	£29,288
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Of this amount £913 is the depreciation—say £500 on 13 engines delivered to the Liverpool and Bury, and £413 on 5 engines to the Manchester, Bolton, and Bury. As regards the old class of engines, the depreciation was arrived at chiefly from consideration of their present state, and the mileage depreciation was calculated therefrom. As regards the modern class of engines, the age of the majority of them not being great enough for the depreciation to be sensibly marked, a mileage depreciation was assumed at $\frac{1}{2}$ d. per mile, somewhat less than the average of the older engines. I observed many engines working the ordinary traffic; I accompanied some of them, both with goods and passenger trains, without giving previous notice, and found these thoroughly masters of their work.

TENDERS.—The stock is 106. They have usually been supplied with the engines, and have nearly the same age. 64 are of the large class, 1,000 gallons, and average about thirteen months old; 42 of a smaller size, 800 to 900 gallons, are much older, averaging eight years. None of them appear to have had more than the ordinary casual repairs done. I have taken the depreciation at 6 per cent. per annum.

Original cost of 106 tenders	£26,630
Present valuation of ditto	21,047

Depreciation	£5,583
--------------------	--------

WAGGONS.—The number of waggons, including merchandise, salt, cattle, coal, ballast, coke, and brake waggons, is 2,446. I have taken the depreciation of the older and lighter class at 6 per cent. per annum, as being more subject to injury whilst running mixed up with the modern and heavier class of waggons. I take the depreciation of the latter at 5 per cent. No repairs appear to have been done amounting to a general renewal. The Company appear to have preferred breaking up the whole stock when worn out. About 164 of the original stock have been, from time to time, broken up.

Original cost of 2,446 waggons	£187,442
Present valuation	160,017

Depreciation

CARRIAGES.—The number of carriages, of all descriptions, is 379. I find that many carriages have been, at various times, entirely rebuilt, and others partially rebuilt since new. I have therefore had, in several cases, to reduce the period over which the depreciation has extended. I consider the depreciation to amount to about 8 per cent. per annum on the close carriages, 6 per cent. on the third-class open carriages and horse-boxes, and 5 per cent. on carriage trucks. About 269 carriages are new within the last three years.

Original cost of 379 carriages	£100,681
Present valuation	88,029
Depreciation	£12,652

GENERAL SUMMARY.—ABSTRACT OF VALUATION OF MOVING STOCK.

	Original Cost.	Present Valuation.	Depreciation.
111 Engines	£175,683	£146,395	£29,288
106 Tenders	26,630	21,047	5,583
2,446 Waggons	187,442	160,017	27,425
379 Carriages	100,681	88,029	12,652
	490,436	415,488	74,948

Copper Trade of Chili.—No. 217.

Chili furnishes an abundant supply of exceedingly rich copper ore. Thus the ordinary quality yields 25 to 30 per cent., and a richer ore, called Ejé, yields from 40 to 50 per cent. of pure copper. England imports from Chili largely, amounting, previous to 1845, to from 12,000 to 15,000 tons, but this quantity has diminished since, owing to a very heavy differential duty payable upon copper imported into England in foreign bottoms. In 1846 England exported from Chili only 9,698 tons, equivalent in value to £343,921. It is this differential duty which has caused the establishment of furnaces at Hamburgh for smelting copper ore. This new course has given return cargoes to German vessels, and has yielded large profits besides; it has freed the north of Germany from the necessity of obtaining bar copper from England, which alone previously manufactured it.

A Sheep Roasted Alive.—No. 218.

A luggage train, on Tuesday afternoon, ran into some sheep which had strayed on to the Midland line at Wigston, and killed two or three of them. On the arrival of the train at Leicester it was found that by some means a sheep had been forced into the fire-box and was still alive, although the wool was burnt off its back, its ears from its head, and even holes through the skin. It was immediately killed and put out of its torture.—*Leicester Mercury*, April, 1849.

Directors Censured.—No. 219.

At a meeting of shareholders, in London, of the Oxford, Worcester, and Wolverhampton Railway, on the 31st May, 1849, Mr. Kennedy moved the first resolution, which was to the following effect :—

“That Sir G. Preston, Sir R. Baker, Dr. Fulton, Dr. Corbett, and Mr. J. Stock, the parties who compose the section of the Directors, have by their conduct forfeited confidence.’ It was necessary for him to say a few words in consequence of the statement which was made by the counsel upon the mandamus motion on Saturday last—that he alone was opposed to the Directors, and that he was actuated by personal motives in offering them a ‘mischievous opposition,’ as it was termed. He believed the fact was indisputable that he had merely acted on behalf of the shareholders of the Company, because he was the only person who had paid his calls, and properly qualified to apply for a mandamus. Mr. Fitzgibbon also stated, at the action against Mr. Morrison, that the great bulk of the shareholders had paid up their calls; but he (Mr. Kennedy) would test the truth of that statement by reading the names of the persons who voted at the last half-yearly meeting. Sir R. Baker, the Chairman, voted out of 50 shares, and his foreman out of 18; Sir G. Preston voted out of 50 shares, and his apothecary out of 20; Mr. Stock voted out of 50 shares, and his clerk out of a like number; Dr. Fulton voted out of 34 shares, and his attorney out of 5. Then there were two gentlemen named Gregg, friends of the Preston family, and a person of the name of Curran, who voted out of one share each—making altogether 13 shareholders out of a constituency of 360, who were hardy enough to come forward and support such men. The facts relating to the transfer of shares had not appeared at the late trials. Sir George Preston, Sir Richard Baker, Dr. Corbett, and Mr. Stock, transferred their shares on the very day that they made the call of £3 15s., and they had promised to meet a committee of shareholders on the previous day, in order to consider the propriety of winding up the affairs of the Company. At that period Sir George Preston and Sir Richard Baker held 50 shares each; but subsequently another call of £2 10s. had been made, and those gentlemen had made further transfers to paupers, so that they now only held 30 shares each, the number requisite to qualify them as Directors. There were 360 shareholders in the Company, holding 6,030 shares, and there was not the slightest doubt that more than half of them were held by ‘gentlemen paupers,’ and that at least 1,000 of them had been transferred by the present Directors and their friends.”

Cost of Collecting the Custom Dues.—No. 220.

The Commercial Association of Manchester, in a letter dated 15th June, 1849, addressed to the Lords Commissioners of the Treasury, London, state as follows :—

“That, independent of all other considerations, this association begs to direct your lordships’ attention to the fact, that the revenue collected in Manchester has increased in a ratio unequalled in the same time by any place in the kingdom, and has been collected at an expense considerably under that of other places. The latter fact ought, on the score of economy alone, to induce the concession of every facility for extending the warehousing of foreign produce in this manufacturing

metropolis. In proof whereof I submit the following statement, shewing the cost of collection at five of the principal ports of the kingdom, compared with the cost of collection at Manchester, the first being copied from a document presented to a Committee of the House of Commons in 1840, by the late chairman of the customs (R. B. Deane, Esq.) :—

Port.	Amount of Customs Duties Collected.			Payment for services specially connected with the collection of the Revenue.			Payment for services not specially connected with the collection of the Revenue.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
London	1,431,245	1	2	402,186	5	0	89,578	19	4	491,769	4	4
Liverpool	4,234,118	6	8	80,964	1	5	23,664	13	6	104,628	14	11
Goole	79,003	13	5	1,526	2	10	679	0	8	2,205	3	6
Hull	884,443	9	11	22,603	5	0	12,910	3	0	35,513	8	0
Bristol	1,089,475	5	5	19,654	6	4	4,376	9	11	24,080	16	3

(Signed) W. DICKINSON, Assistant Compt.-General.

Office of Compt.-General, Custom House, London,

16th April, 1840.

The Customs collected in Manchester amount to £300,000 per annum, and are collected for £3,000; and comparing this scale of expenditure to the amount collected at the above ports, the saving to the country, in favour of Manchester, would be as under :—

Port.	Cost of Collection.			Would cost in Manchester.			Saving.		
	£	s.	d.	£	s.	d.	£	s.	d.
London	402,186	5	0	114,312	0	0	287,874	5	0
Liverpool	80,964	1	5	42,341	0	0	38,623	1	5
Goole	1,526	2	10	790	0	0	736	2	10
Hull	22,603	5	0	8,844	0	0	13,759	5	0
Bristol	19,654	6	4	10,894	0	0	8,760	6	4
	626,934	0	7	177,181	0	0	349,753	0	7

“From the above statement, your lordships will observe that the expense of collection is—

In London	3½ per cent. on revenue.
„ Liverpool	1½ ditto.
„ Goole	1½ ditto.
„ Hull	2½ ditto.
„ Bristol	1 13-16ths ditto.
„ Manchester	1 ditto, only.

And that a total saving of £349,753 would be effected, if the collection of the revenue at the above five places only was conducted upon the same principle as is acted upon in Manchester.

"The important saving to the country must be quite apparent to your lordships, and this association is of opinion that if Manchester were put upon an equal footing with other places the amount now collected, viz., £300,000, would soon be largely increased, without adding much, if anything, to the present cost of collection (£3,000); thus still further reducing the per centage."

Quantity of Malt Made and Used.—No. 221.

The following is an Account of the Total Number of Quarters of Malt made between the 10th day of October, 1844, and the 10th day of October, 1845—45-46, 46-47, 47-48; distinguishing the Quantity made in each Country, and the Quantity used by Brewers, and Victuallers, and Retail Brewers:—

		Quarters of Malt Used.			
		Quarters of Malt Made	By Brewers and Victuallers	By Retail Brewers.	Total.
England	Between 10th Octo- ber, 1844, and 10th October, 1845.	3,925,871	3,052,720	413,059	3,465,779
Scotland		543,596	123,668	.....	123,668
Ireland		218,820	159,677	.....	159,667
The United Kingdom.....		4,687,487	3,336,065	413,059	3,749,124
England	Between 10th Octo- ber, 1845, and 10th October, 1846.	4,224,455	3,314,150	446,117	3,760,267
Scotland		554,163	133,173	.....	133,173
Ireland		208,732	183,071	.....	183,071
The United Kingdom.....		4,987,350	3,630,394	446,117	4,076,511
England	Between 10th Octo- ber, 1846, and 10th October, 1847.	3,690,003	3,016,915	382,944	3,399,859
Scotland		477,025	109,960	.....	109,960
Ireland		178,369	154,169	.....	154,169
The United Kingdom.....		4,345,397	3,281,044	382,944	3,663,998
England	Between 10th Octo- ber, 1847, and 10th October, 1848.	4,193,757	3,051,721	387,757	3,430,478
Scotland		504,333	109,331	.....	109,331
Ireland		214,914	159,962	.....	159,962
The United Kingdom.....		4,913,004	3,321,014	387,757	3,699,771

Enclosed, or Tubular Wooden Bridges.—No. 222.

The first in date and merit is that of Schaffhausen, built over the Rhine, where the influence of that river's cataract, a couple of miles lower down, at Laufen, is felt in great force. From its firm construction it was accounted the best wooden

bridge in the world, though the flatness of the banks on each side offered no facilities; and the merit of its projection and construction is due to a common carpenter of the place, called John Ulrick Grubenman, in 1757. Its entire length was 353 feet 7 inches, without support from below; its breadth was 15 feet 6 inches. With the passage of an individual it vibrated sensibly, but was kept immovable and firm when heavily-laden waggons passed over it. The same builder, in conjunction with his brother John, built another hanging and covered bridge in 1778, over the Limmat, near Wittengen, with a span of 346 feet, and with some improvements and greater firmness than the Schaffhausen earlier one. Both were burnt in 1799 by the revolutionary hordes of France, when retreating after a defeat by the Austrians. In more modern times, the art of wooden bridge-building has been carried to great perfection in Hungary, by the Austrian road architect, John Gross, who in 1807-8 built a covered bridge over the Waag, in the county of Thurots, on the principle of the former at Schaffhausen, which seems to have served as a general model. The most curious feature in these Magyar structures is their small cost. The above was built for only 35,000 gulden, or about £3,000.

—*The Builder.*

Weekly Returns of Railways.—No. 223.

At a meeting of the York and North Midland Railway, 20th May, 1849,—

Mr. Charlton, York, thought this a most important point, as the rumours to which allusion had been made were generally believed. He (Mr. Charlton) had happened to meet a Railway clerk that morning who was not now in the employment of the Company, and that person had told him that the weekly accounts were not correct. It appeared that the mode adopted was to look at the accounts of the previous year, add something for increase, and publish them. He is now present, and should be asked the question.

Time of Acts, and Opening of Railways.—No. 224.

The following relative time of obtaining Acts and the opening of Railways was given by Mr. Ricardo, M.P., on the 31st January, 1849, at a meeting of the North Staffordshire Company:—

“He would now proceed to remark on the position of their works; and in doing so he must again compare the line with others. The York and North Midland Company obtained their Act in June, 1836, and opened the first portion of their line in January, 1839—three years and a half afterwards. The Brighton Railway Company obtained their Act in January, 1837, and opened their line in September, 1841; the Grand Junction Company obtained their Act in March, 1833, and the first portion of their line was opened in January, 1838—four and a quarter years after; the Manchester and Leeds obtained their Act in July, 1836, and opened the first portion of their line in January, 1841—five years after; the London and Birmingham obtained their Act in 1833, and opened their line in February, 1839—five years and three quarters after; the North Staffordshire Railway Company obtained their Act in June, 1846, and if they did not receive a dividend upon their line by July, 1849, which would be only three years after having obtained their Act, he should be very much mistaken.”

Vessels entering London.—No. 225.

The following is a Statement of the Number and Tonnage of Vessels which Entered the Port of London with Cargoes from Foreign Ports, distinguishing the Countries whence they arrived, during the Year 1847.

COUNTRIES.	BRITISH.		FOREIGN.	
	Ships.	Tons.	Ships.	Tons.
Russia	719	155,762	314	55,961
Sweden	11	1,103	197	49,498
Norway	3	240	164	47,462
Denmark	40	6,518	587	39,938
Prussia	231	82,066	362	70,844
German States.....	193	51,817	324	22,600
Holland	588	116,159	286	21,720
Belgium	223	42,467	133	20,787
France	693	88,880	325	23,089
Portugal, Azores, and Madeira ..	350	36,095	13	1,761
Spain and Canaries.....	245	24,471	50	5,120
Italian States	127	16,902	45	11,239
Ionian Islands	32	4,136	..	....
Greece	50	7,320	1	210
Moldavia and Wallachia	18	2,716	26	5,186
Turkish Dominions	85	14,538	9	2,595
Syria and Palestine.....	1	136	..	....
Egypt.....	106	28,652	15	3,830
Tunis, Algeria, and Morocco ..	12	1,579	..	....
Africa, Foreign Possessions	4	777	2	756
Asia,	33	12,122	3	1,557
China	62	28,347	..	....
Foreign West Indies	127	34,054	44	9,259
America, United States.....	84	31,322	180	92,248
„ Central & Southern States ..	188	50,223	11	2,637
The Whale Fisheries	16	5,306	..	....
TOTAL	4,241	793,698	3,091	487,797

Statement of the Number and Tonnage of Coasting Vessels which Entered the Port of London in the Year 1847.

	Vessels.	Tonnage.
General Coasters, including Colliers	21,394	3,010,327
Irish Traders	532	106,033
TOTAL	21,926	3,116,360

Statement of the Number and Tonnage of Vessels which Entered the Port of London with Cargoes from the Colonies and Dependencies of England, during the Year 1847.

COLONIES.	BRITISH.		FOREIGN.	
	Vessels.	Tons.	Vessels.	Tons.
Gibraltar	9	818	..	..
Malta	30	5,461	4	1,027
British Possessions in Africa	214	58,072	..	..
" Asia	437	209,211	2	914
British North American Colonies	462	205,935	8	2,806
British West Indies	369	111,340	..	..
Channel Islands	503	52,077	..	..
TOTAL	2,024	642,914	14	4,547

The Capital invested in Railways.—No. 226.

The outcry against Railway investments did not find favour with those who were estimated to understand best our monied interests. Both an ex-Chancellor of the Exchequer and the ex-Premier in the currency debate, in December, 1847, animadverted on the assertions of the anti-Railway grumblers. The first, Mr. F. T. Baring, said—

“There has been plenty of speculation, undoubtedly. There has been a good deal of speculation in Railways. Now, one thing is very singular in the House of Commons—its shortness of memory, its forgetfulness of what it did a few years ago. Will you have the goodness to recollect what was the great grievance and subject of complaint some time ago? It was, that you had so much capital you could not find any profitable mode of investment for the whole of it. Well, of course when that was the case capital found an outlet in every possible direction, and you could not but have speculation. And then you had another difficulty—you had a great mass of labour, for which you had no employment. Both your capital and your labour were finding channels for themselves in foreign countries. If there was any blessing for which you might have prayed then, it was for reasonable modes of profitably employing your capital, and honestly employing your labour. The blessing eventually came, and you found what you wished for in Railways. I am very well aware that Railways have been overdone, just as in the end every other speculation is overdone; but I confess, while I am not insensible to the evils arising from over-speculation, that I have considerable doubts of the expediency now of the House or the Government interfering for the purpose of checking or directing speculation. No Act of Parliament can stop speculation. You have it, in one shape or another, from time to time; and if I have read the history of my country aright, I can see no reason to fear but that, so long as you leave us free, there will always be sufficient energy and intelligence amongst us to restore us from any of those temporary difficulties, resulting from an excess of speculation, in which, as now, we may find ourselves. It is only when you enact by law how long the labourer shall work, and how much the capitalist shall invest, that there is any likelihood of our embarrassments ending fatally. I

hope that no such attempt will be made now. A Committee is to be appointed, to whom Railway Bills are to be referred, with a view to seeing what is to go on and what must be stopped. The same thing has been tried before; I was one of the Committee, and I rejected any such proposition. I am of the same opinion now as I was then. I grant all the evils that may flow from speculation, but I question the wisdom of a Committee of this House telling me—though I am no speculator—or any one else, how we shall deal with our money. I hope, however, this Committee will do its work well—that it will give us some comprehensive report, and tell us on what principles we ought to go. I hope they will do their business in a business-like manner. The supposition on which they are proceeding is, that there are too many railways contemplated for the floating capital of the country to provide for; and I expect of the Committee that they will enter into all the details, and give us those reasons on which they found this conclusion—what is the floating and what is the fixed capital of this country, and how much is required for our legitimate wants. We are told that the rate of interest derived on loans to Railways is so high that we cannot go on with our regular trade; and, if that be so, the Committee should inform us to what extent they consider interest ought to go, and how far capital ought to be free in its investments. We may, indeed, have a recommendation of some new usury laws, for the purpose of defending the mercantile and manufacturing interests against Railways, on the ground that they monopolise the floating capital. The more I consider this question the more I am convinced that we shall be unable to lay down any well-defined principle to which, under all circumstances, it would be safe to adhere. Just at the present moment it would probably be no very great harm if we decided upon ‘hanging up’ all the Railway Bills; but if you enter upon an inquiry in order to find out what ought to go on and what ought to be rejected, you undertake a task in which you are certain to fail. In the story of ‘Rasselas’ there is some account of a philosopher who laboured under the belief that to him was given the superintendence of the movements of the sun and the moon. The poor old soul lived a very unquiet life, and when he supposed that he was released from further labour the consolation left to him was that he had done no mischief.”

Sir R. Peel spoke as follows:—

“Now, I do not estimate the effect of that application of capital so highly as some persons do. I think that, under ordinary circumstances, nothing could be more advantageous than such an application of capital. I think that by the extension of Railways we are laying the foundation of great future prosperity, and I very much doubt whether we ought not to deduct from any evil which the sudden application of capital to Railways may have caused, all the evil that would have been caused by the investment of the same capital in foreign Railways. I believe that if it had not been for the scarcity of food and the suspension of engagements in consequence of improvident commercial enterprise, we should have been able to bear the demand for capital for Railways with little inconvenience. I do not look upon the money expended on Railways as dead loss. The time will shortly come when the Railways will be completed, I hope, with advantage to those who have engaged in them; but, at all events, when we look at the saving which will thereby be effected in the conveyance of goods and the locomotion of individuals, it is impossible to doubt that they will ultimately be sources of great improvement and prosperity. Nevertheless, the Railway expenditure operates for the present to increase the restriction arising from other causes.”

Vessels to and from Stockton-upon-Tees.—No. 227.

The following is a Statement of the Number and Tonnage of Vessels which Entered and Cleared at the Port of Stockton-upon-Tees, distinguishing the Foreign and Colonial from the Coasting Trade, together with the Number and Tonnage of Vessels Registered in and belonging to that Port, in the Year 1847.

FOREIGN AND COLONIAL TRADE.				COASTING TRADE.				Vessels Registered in and belonging to the Port.	
ENTERED.		CLEARED.		ENTERED.		CLEARED.			
Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
590	72,144	877	102,952	792	55,241	5,035	526,108	178	24,894

Vessels to and from Southampton.—No. 228.

Below is a Statement of the Number and Tonnage of Vessels which Entered and Cleared with Cargoes at the Port of Southampton, distinguishing the Foreign from the Coasting Trade, in the Year 1847.

FOREIGN TRADE.				COASTING TRADE.			
ENTERED.		CLEARED.		ENTERED.		CLEARED.	
Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
512	126,546	391	105,250	1,743	177,938	1,446	75,256

Northern and Staffordshire Potteries compared.—No. 229.

Mr. Ricardo, M.P., Chairman of the North Staffordshire Railway, states, in a letter dated 9th April, 1849, addressed to the manufacturers of the Staffordshire Potteries, as follows,—

To one more point set forth in the document of the memorialists I must refer—as to how far the competition with the Northern Potteries is affected by the charges of the North Staffordshire Navigation.

Although the Directors have always felt that the local influences on this competition were elements entirely beyond their control, yet, anxious to give every matter connected with the trade of the Potteries their fullest consideration and investigation, they despatched one of their most intelligent and experienced officers to the North, with instructions to inquire into all particulars relating to the question, and to report thereon to the Board.

I find, from this gentleman's report, that the Northern Potteries are for the most part situated upon the banks of the Tyne, the Clyde, the Tees, and the Calder—all navigable rivers, and accessible to sea-going vessels; which circumstance would in itself, if the cost of transport were the main element of Pottery manufacture, and if the difference of the cost of transport were as great as is alleged, and, indeed, as might be supposed, at once extinguish all inland competition.

But, taking the average of materials consumed in a large manufactory, and charging upon them the cost of conveyance in Staffordshire and the North respectively, the difference does not appear so great as might be anticipated, as the following Table will shew :—

Account of the comparative Cost of Materials used in a Manufactory in the Staffordshire and in the Northern Potteries, inclusive of the charge of Conveyance.

Materials.	Quantity.	In Staffordshire.			In the North.		
		Total Cost.			Total Cost.		
	Tons.	at	£	s. d.	at	£	s. d.
*Flints	250	20s.	250	0 0	5s.	62	10 0
Black Clay.....	100	25s.	125	0 0	18s.	90	0 0
Blue Clay	300	32s.	490	0 0	25s.	375	0 0
Cornwall Stone.....	150	34s.	255	0 0	27s.	202	10 0
China Clay	250	40s.	500	0 0	33s.	412	10 0
	1,050		1,610	0 0		1,142	10 0
			1,142	10 0			

Balance in favour of the North .. £467 10 0

* This is scarcely a fair comparison, the flints used in Staffordshire being a superior article. The flint ground in the North is picked up indiscriminately by vessels on the Norfolk Beach, and carried for the most part as ballast.

But, in order fairly to estimate the comparative advantages of the two districts, we must convert the raw material into manufactured goods, according to the rates in which they are produced in each, and ascertain how far the cost of carriage bears on the price at the port of shipment.

The following Tables have been prepared for the purpose :—

Account of Goods Manufactured from the Raw Material described in the foregoing Table, in Staffordshire and the North, respectively, shewing the Cost of Carriage in each case to the Port of Shipment :—

FREIGHT AND TONNAGE OF STAFFORDSHIRE GOODS DELIVERED IN LIVERPOOL, AT 13s.

Description.	Value. £	No. of Tons, 3 Packages to a Ton.		Cost of Carriage. £ s.	Per Cent. on Value.
Fine Goods, at £16 per package	9,000	562	188	122 4	1½
Medium ditto, at £8 „	18,000	2,250	750	487 10	2 5-7
Common ditto, at £4 „	9,000	2,250	750	487 10	5 3-7
	<u>36,000</u>	<u>5,062</u>	<u>1,688</u>	<u>1,097 4</u>	<u>3</u>

FREIGHT OF NORTH GOODS DELIVERED AT HULL, LONDON, &c., AT 10s.

Description.	Value. £	No. of Tons, 3 Packages to a Ton.		Cost of Carriage. £ s.	Per Cent. on Value.
Fine Goods..... Nil					
Medium ditto, at £8 per package	8,000	1,000	333	166 10	2
Common do., at £4 do.	16,000	4,000	1,333	666 10	4 1-6
	<u>24,000</u>	<u>5,000</u>	<u>1,666</u>	<u>833 0</u>	<u>3½</u>

ABSTRACT OF FREIGHT ON

Staffordshire Goods, at Liverpool, value £36,000.			North Goods at Hull, London, &c., value £24,000.		
Description.	£	Per Cent.	Description.	£ s.	Per Cent.
Raw Materials.....	1,610		Raw Materials.....	1,142 10	
Manufactured Goods..	1,097		Manufactured Goods	833 0	
	<u>2,707</u>	<u>7-52</u>		<u>2,975 10</u>	<u>8-45</u>

Shewing that, in the price of earthenware at the port of shipment, the cost of transport enters for one per cent. less in Staffordshire than in the North.

These Tables, which have been compiled with great care, with a view of obtaining a practical result, appear to the Directors to present a much more encouraging aspect than the statement of the memorialists would have led them to anticipate. And it does seem to them that the deputation have fallen into an error in instituting a comparison between the general trade of the Potteries and the particular trade of the North, and that it would be more conclusive and more rational to compare the trade of the North to London and Hull, with the trade of the Potteries to Liverpool.

The staple trade of the North is in the coarsest possible ware, which is transported in bulk to the Hull and London markets. The demand for this description of goods is rapidly diminishing, while the consumption of the better article manufactured in the Potteries is steadily increasing. So that the utmost extent of the disadvantage, if disadvantage there can be, is confined to a particular and very limited market, and to the most common article, the demand for which is daily decreasing.

Cotton Goods Exported to all Parts.—No. 230.

The following is a Statement of British Manufactures of Cotton, including Twist and Yarn, Exported from the United Kingdom to all Parts of the World:—

Yr.	COTTONS Entered by the Yard.		COTTONS entered by value, viz., Hosiery, Lace and Small Wares.	COTTON THREAD.		COTTON TWIST and YARN.	
	Quantity.	Declared Value.		Quantity.	Declared Value.	Quantity.	Declared Value.
	Yards.	£.	£.	Lbs.	£.	Lbs.	£.
1815	252,884,029	18,158,172	815,271	194,976	64,763	9,241,548	1,674,021
1816	1-9,293,731	12,309,079	681,508	238,939	65,126	15,740,675	2,628,449
1817	236,987,669	13,475,534	500,426	269,221	71,089	12,717,382	2,014,181
1818	235,331,695	15,708,186	507,110	315,444	95,026	14,743,675	2,395,304
1819	202,514,682	11,714,507	466,716	257,108	68,252	18,085,410	2,519,783
1820	259,556,541	13,209,000	498,723	384,255	89,388	23,032,325	2,826,643
1821	296,495,901	13,192,904	514,009	504,402	109,794	21,526,369	2,305,830
1822	304,479,691	13,853,554	612,077	394,686	115,635	26,595,468	2,697,590
1823	301,816,254	12,980,544	605,651	621,450	112,473	27,378,986	2,625,947
1824	314,651,133	14,448,255	755,293	581,528	111,593	33,605,510	3,135,396
1825	336,466,698	14,233,010	769,177	719,486	151,083	32,641,604	3,206,729
1826	267,060,534	9,868,623	592,390	771,088	143,401	42,179,661	3,491,338
1827	365,492,804	12,948,035	919,032	1,277,484	227,956	44,898,774	3,545,678
1828	363,328,431	12,483,249	951,443	1,292,201	214,329	50,505,751	3,595,405
1829	402,517,196	12,516,247	868,644	1,059,537	173,241	61,441,251	3,976,874
1830	444,578,498	14,119,770	1,002,542	1,160,481	172,611	64,645,342	4,133,741
1831	421,385,393	12,163,513	904,217	1,542,313	214,455	63,821,440	3,975,019
1832	461,045,503	11,500,639	942,771	1,672,579	232,232	75,667,150	4,722,759
1833	496,352,096	12,451,090	1,074,128	1,853,234	257,189	70,626,101	4,704,024
1834	555,705,809	14,127,352	875,559	2,330,748	299,660	76,478,498	5,211,015
1835	557,515,701	15,181,481	925,563	2,265,380	314,721	83,214,198	5,706,589
1836	637,667,627	17,183,167	998,958	2,223,814	329,567	88,191,046	6,120,366
1837	531,373,663	12,727,983	633,873	2,236,112	258,319	103,455,138	6,955,942
1838	690,077,622	15,554,733	857,767	2,475,942	303,357	114,596,602	7,431,869
1839	731,450,123	16,378,445	966,644	3,041,427	347,093	105,686,442	6,888,193
1840	790,631,997	16,302,220	936,873	2,800,625	328,217	118,470,223	7,101,308
1841	751,125,624	14,935,810	903,692	2,806,085	343,008	123,226,519	7,266,968
1842	734,698,809	12,887,220	701,439	2,516,195	319,225	137,466,892	7,771,464
1843	918,640,205	15,168,464	750,829	2,807,741	334,707	140,321,176	7,193,971
1844	1,046,670,823	17,612,146	830,239	3,172,109	374,379	138,540,079	6,988,584
1845	1,091,686,069	18,029,808	785,390	2,918,839	340,889	135,144,865	6,963,235
1846	1,065,460,589	16,701,632	717,927	2,807,440	298,219	161,892,750	7,882,048
1847	942,540,160	16,207,103	816,158	3,469,333	351,983	120,270,741	5,937,950

Cost of keeping Locomotive Engines

The following valuable information is ext Mr. T. E. Harrison to the Committee of Inve Newcastle, and Berwick Railway, dated 20th

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FIRST CLASS, OR "LOCAL TRAFFIC"

I have taken the result of the cost of repairs of the 1 engines as affording the best data within my reach, e. over a period of fourteen years, and the following appear to be the general results:—

1st. That, independent of the ordinary repairs, those engines have required a periodical repair after running an average mileage of 68,000 miles.

2nd. That the average cost of such repairs, making an allowance for the increased size given to the engines and tenders when re-built (in 1847 and 1848), has been £719 for each engine.

3rd. That the sum of £719 average per engine spent periodically, viz., after running an average of 68,000 miles, is sufficient to restore the engine to its original value in use, taking into account that the sums spent in the ordinary course of repairs are very considerable, and include the complete restoration of most of the working parts.

4th. That the above gives an average charge of 2½d. per mile as the amount of deterioration of the engines up to the period when the extraordinary repairs take place, and as forming the basis for calculating their value at any intermediate period.

5th. That the average annual mileage of each engine of this class is 9,483 miles.

The above is based on the assumption that the engines are always kept up to as high a working condition in all their parts as it is practicable, and that in re-constructing them periodically they are not varied in size or form, and it is also to be observed that the annual expense of ordinary repairs to these engines is considerably more than in the passenger engines.

I have in all cases taken the original cost of the engines as the basis of calculating their present value, and I believe this to be the only correct mode, as any calculation based on the price at which engines might be bought at the time a valuation is made would lead to a constant fluctuation in such valuation, and might, in some cases, shew an apparent improvement in the value of the stock, whilst, in fact, an actual deterioration may have taken place, and in other cases the reverse.

SECOND CLASS.—THROUGH PASSENGER ENGINES.

With reference to the through passenger engines, which differ essentially from the coal engines, the period during which I have any accurate detail derived from the working of the engines on this line extends over about 4½ years. I have endeavoured to arrive at some principle for calculating their value after a good deal of consideration and consultation with Mr. Fletcher, and taking as the basis the result of our experience so far as it could be applied.

The duration of a passenger engine may be divided into four periods, determined principally by the wear of the tubes, fire-box, and boiler.

I have taken the average of six of the passenger engines, which have been longest at work, and find that the average mileage to the period when they have

required new tubes and other heavy repairs, has been 94,642 miles, say 95,000, and the average cost of extraordinary repairs, at and about that period, £378 18s. 6d., say £400 per engine.

I consider an engine, after this outlay upon it, to be then restored to such a condition that it will run another distance of 95,000 miles, at the end of which period it will require still heavier repairs, which will amount to £640, and the engine, after being so repaired, will be in a situation again to run 95,000 miles, at the end of which period it will require repairs similar to the first period, viz., £400, but after running 95,000 miles more, making in all 380,000 miles, the engine will require a complete rebuilding, the cost of which will be £1,040, always assuming that the engine in the meanwhile is kept in as complete a working condition as practicable.

The total of these periodical outlays is £2,480, and the mileage being 380,000 miles, gives 1-56d. per mile as the amount of deterioration of the engine, and as forming the basis for calculating its value at any period, deducting the cost of the periodical repairs when they take place, and ultimately restoring it to its original value.

The average mileage per annum of each engine of this class has been 29,011 miles, which will give about 3½ years as the time at which each periodical repair may be required.

The value of an engine and tender at each period of its life, according to the above principle, will be as follows:—

Original cost of an engine and tender.....	£2,000
1st period, deterioration, at 1-56d. per mile over 95,000 miles....	620
Value of engine before repairs	1,380
Add for repairs as estimated.....	400
Value of engine after repairs.....	1,780
2nd period, deterioration on 95,000 miles, at 1-56d.	620
Value of engine before second repairs	1,160
Add for repairs as estimated.....	640
Value of engine after repairs.....	1,800
3rd period, deterioration on 95,000 miles	620
Value of engine before third repairs	1,180
Add for repairs as estimated	400
Value of engine after repairs.....	1,580
4th period, deterioration on 95,000 miles	620
Value of engine before fourth repair	960
Add estimated restoration	1,040
Engine restored to its original value in use	£2,000

And the value at any intermediate period may be calculated in the same manner according to the mileage.

THIRD CLASS.—LOCAL PASSENGER ENGINES.

In estimating the value of the local passenger engines, I have adopted the same mode of valuation as for the through passenger engines, taking the same sums for the cost of the periodical repairs and ultimate restoration; but taking the

mileage of each period at 65,000 miles instead of 95,000, this being the result of an average of several local passenger engines, and which gives the average charge of 2-3d. per mile as the amount of deterioration of the engines of this class, and as forming the basis for calculating their value at any period and their ultimate restoration.

The average mileage of these engines may be taken at about 19,124 miles per annum, which will give 3½ years as the time at which each periodical repair will be required.

FOURTH CLASS.—BRANCH AND PILOT ENGINES.

I have applied the same principle of calculation to this class of engines, but, as they are a cheaper engine, I have taken the following as the periodical cost of repairs:—

First period	£300
Second ditto	500
Third ditto	300
Fourth ditto	900
	<hr/>
	£2,000

I have taken the average mileage period for the repairs at 60,000 miles, which gives 2d. per mile as the average amount for deterioration, and ultimate restoration. The average annual mileage of this class of engines is 15,546 miles.

FIFTH CLASS.—THROUGH COAL TRAFFIC AND GOODS ENGINES.

Applying the same principle, and taking the cost of the periodical repairs, on the same scale, as the through passenger engines, the results I have arrived at are as below.

Average mileage period for repairs, 54,000 miles.

Average amount per mile for deterioration, 2-75d.

Average annual mileage of the engines, 18,011 miles.

The value of the engines at each period has been calculated on the principle previously laid down, and it will be seen that deterioration takes place until the engines reach a value about 33 per cent. below their first cost, and that their value after that period will fluctuate between 20 and 30 per cent. below their prime cost, and this may be taken generally as somewhere about the average permanent value of the stock. This, however, will depend a great deal upon the number of spare engines which the Company possesses beyond those in daily use. When the number of spare engines is great the value will not get so low. We have at present one spare engine to every two engines running daily, a number amply sufficient when the stock is well kept up; and I consider that the average value in our case ought never to reach 25 per cent. below the first cost.

The conclusions which I arrive at, after a careful consideration of all the circumstances, are—

That it is perfectly practicable to maintain all the locomotive engines and general rolling stock of a railway in good and efficient working order out of revenue, without the necessity of keeping a deterioration fund for that purpose.

That the rolling stock, though kept in perfectly efficient working order, can never, as a whole, be of the value equal to its original cost, although each individual part of it will be periodically restored to such value.

That the average value of the locomotive stock, after four or five years' use, may be taken to be from 20 to 30 per cent. below its original cost, and that it will

permanently continue at an average value fluctuating between these limits. The carriage and waggon stock, however, will deteriorate to a greater per centage, and it will probably, in the present case, be a period of ten years before we arrive at a maximum annual expenditure.

That the average annual cost of repairs of the whole of the stock, after the above periods, will continue nearly the same, or within such limits that it will not be necessary to provide any fund to equalise it.

Zinc Imported.—No. 232.

Below is an Account of the Quantities of Foreign Zinc Imported into the United Kingdom, distinguishing the Countries from which the same were Imported, in each Year from 1845 to 1847 :—

COUNTRIES FROM WHICH IMPORTED.	1845.	1846.	1847.
FOREIGN ZINC OR SPELTER.	Tons. cwt. qrs. lbs.	Tons. cwt. qrs. lbs.	Tons. cwt. qrs. lbs.
Sweden	29 19 1 9	26 8 1 26	....
Denmark	33 6 0 13	27 10 1 26	29 5 3 25
Prussia	6,917 0 2 26	3,652 17 1 2	5,880 14 3 24
Germany	5,501 2 2 2	....	....
Hanse Towns	187 17 2 20	3,178 1 3 6	5,828 13 3 9
Holland	230 1 1 21	25 13 3 25	5 13 2 22
Belgium	2 4 2 26	333 4 3 21	484 7 3 15
France .....	....	0 9 3 26	540 2 2 12
British Territories in the East Indies .....	....	1 0 0 0	....
TOTAL	12,902 12 2 5	7,245 6 3 20	12,768 18 3 23

Velocity of Trains down Inclined Planes.—No. 233.

At a meeting of the Institution of Civil Engineers, 12th June, 1849, was read a "Statement of Observations made on the Initial and Terminal Velocities of Trains in descending Inclined Planes," by Capt. W. Moorsom, M. Inst. C.E.

The observations were eighty-two in number, and were made during the ordinary passing of trains on the Waterford and Kilkenny Railway, the gauge of which is 5 feet 3 inches, over two adjoining inclines, each falling at the rate of 1 in 100 for upwards of a mile and a half, with a short intermediate level between them. The speeds at which the descent was begun varied from 20 to nearly 44 miles per hour, and the loads varied from 32 to 94 tons. One of the planes presented for the greater part of its length two curves of a radius of one and a quarter and one and a sixth of a mile respectively, and the other plane was straight for part of its length, but contained a curve of two and a half miles radius. The general results in the more curved plane were, that initial velocities of 20 to 30 miles per hour, at the top of the plane, became terminal at velocities of 24 to 28 miles per hour; and on the straighter plane the same initial velocities became

terminal between 29 and 31 miles per hour. Again, on the more curved plane, initial velocities between 30 and 40 miles per hour became terminal at velocities between $29\frac{1}{2}$ and $31\frac{1}{2}$ miles per hour; and on the straighter plane the same initial velocities became terminal at $30\frac{1}{2}$ to $33\frac{1}{2}$ miles per hour. Initial velocities above 40 miles per hour were noted only upon the more curved plane, and became terminal at 30 to 31 miles per hour. There did not appear to be any constant proportion between the load in motion and the terminal velocity; but the latter appeared to be dependent more upon initial velocity than upon the weight or character of frontage of the trains. The general practical conclusion was deduced, that the question of gauge had little or nothing to do with terminal velocity derived from gravity, and that the views generally entertained by engineers during past years, of the great resistances experienced by trains at high velocities, were borne out by the observations recorded in the paper.

Cost of Re-laying a Double Line of Railway.—No. 234.

Mr. T. E. Harrison, in his Report to the Committee of Investigation of the York, Newcastle, and Berwick Railway, dated 20th July, 1849, states:—

The following calculations of the Cost of Re-laying a Double Line of Railway have been made, and I have added a comparison of my estimate with that of Captain Huish.

Cost of Rails, Chairs, &c., for One Mile of Double Line of Railway.

RAILS, $82\frac{1}{2}$ lbs.

Per yard=	260 tons @ £2 10 0=	£650
Chairs=28 lbs.=88 „	@ £1 10 0=	£132
And $\frac{1}{3}$ of £132		88
Labour in re-laying 1,760 double yards, @ 3s.		264
Keys 7,040, @ £5 per 1,000		35
Iron pins, 8 tons, @ £10.		80
		—£1,117

RAILS, 65 lbs.

Per yard=	205 tons, @ £2 10 0=	£512 10
Chairs=20 lbs.=63 „	@ £1 10 0=	£94 10s.
And $\frac{1}{3}$ of £94 10s.		63
Labour in re-laying, as above.		264
Keys and pins, as above		115
		—£954 10

RAILS, 60 lbs.

Per yard=190 tons, @ £2 10s.		£475
Chairs as above		63
Labour ditto.		264
Keys and pins.		115
		—£917

RAILS, 50 lbs.

Per yard	=158 tons, @ £2 10s.	£395
Chairs=18 lbs. 57 „	@ £1 10s.=and $\frac{1}{3}$ of £85 10s.	57
Labour		264
Keys and pins, as above		115
		—£831

RAILS, 40 lbs.

Per yard=126 tons, @ £2 10s.	£315
Chairs, as above	57
Labour	264
Keys and pins	115
	<hr/> £751
Sleepers for one mile=3,520, @ 4s.	£704

Cost of Re-laying a Mile of Double Line of Railway, as estimated by Captain Huish, and compared with the above calculation.

CAPTAIN HUISE.

Rails, 258 tons, @ £6 10s.	£1,677	0	0
Carriage 258 tons, @ 5s.	64	10	0
Cr.	1,741	10	0
Old rails, 258 tons, @ £4 10s. ..	£1,161	0	0
Less carriage, @ 5s.	64	10	0
	1,096	10	0
Chairs, 91 tons, @ £4 12s. 6d. ...	420	17	6
Carriage, @ 5s.	22	15	0
Cr.	443	12	6
Old chairs, 91 tons, @ £2 10s.	227	10	0
Less carriage, @ 5s.	22	15	0
	204	15	0
Sleepers, 588 joints, @ 10s.	294	0	0
2,932 middle, @ 5s.	733	0	0
3,520			
Laying.			
1,760 lineal yards labour in re-laying, including spikes and keys, @ 5s. }	440	0	0
	£2,350	17	6
Estimate as above.			
Rails, 260 tons, @ £2 10s.	£650	0	0
Chairs, 88 tons, @ £1 10s. and $\frac{1}{2}$	88	0	0
Sleepers, 3,520 tons, @ 4s.	704	0	0
Laying, including spikes and keys, &c.	379	0	0
	£1,821	0	0

The principal difference in the above appears to be in the chairs and sleepers. The chairs it is evident we are able to get much cheaper here, and I have not calculated anything for carriage, as I do not consider it necessary, situated as we are.

The sleepers I calculate on using are Scotch, prepared with creosote, and for which we lately had a contract at 3s. 7d., 9 feet long, 10 X 5, as the smallest dimension, and I have always been able to get a sufficient number for the joints by selecting the largest, and I have estimated the sum of 4s. as an average for the cost of the sleepers throughout, whether for the main line or branches and inclines, and in the latter case we use lighter sleepers.

I feel quite confident that the above calculation is sufficient to do the work in this part of the country.

Hudsonia.—No. 235.

The following anecdotes are told of Mr. Hudson's course of proceeding, when sailing on the high tide of popularity. Mr. Hudson had entered into certain engagements for the Midland Company, which he had not vouchsafed to divulge to the Board. The Directors, having vainly attempted to worm out the coveted secret, screwed up their courage one Board-day to demand it. They accordingly met earlier than usual, and when their lord arrived they were all exceedingly mum. "How now, gentlemen," said Mr. Hudson; "has anything extraordinary happened?" "Only," replied one, "that we, being equally responsible with yourself for what is done, are desirous of knowing what your plans are." "You are, are you?" rejoined the Railway monarch, "then you will not;" and the business of the Board proceeded.

When Mr. Hudson joined the Eastern Counties Board, Mr. Crosbie, a spirited gentleman, of Liverpool, was Deputy-Chairman. Mr. Hudson was anxious to have Mr. Waddington for his deputy, and so informed the existing Deputy-Chairman. Mr. Crosbie, not liking this summary mode of ejection, refused to relinquish the office to which, by his colleagues, he had been elected. "Very well," said Mr. Hudson, jumping up before the fire, "I am brought in by the universal voice of the shareholders, and if I can't have my own Deputy-Chairman, I shall return home and leave the Company." The other members of the Board, seeing the storm that was brewing, interfered, and besought the belligerents to go into another room, and try if they could not come to an arrangement. They did so, and in a few minutes after they all returned smiling: Mr. Hudson had Mr. Waddington in the post he wanted him, and Mr. Crosbie scarcely ever troubled the Board after with his presence.

On another occasion, July, 1847, against the opinion of Mr. Hudson, a committee was carried, for the purpose of looking into the accounts. Mr. Hudson was *ex-officio* Chairman of it, and on leaving the room after the appointment, he observed, "Well, gentlemen, I am Chairman of this committee, and, of course, you will not meet until I summon you." That summons, to the present day, was never issued.—*Herapath's Railway Journal*, May 5th, 1849.

MR. HUDSON'S TESTIMONIAL.—Names for near £18,000 were put down for this testimonial, but under £16,000 was subscribed. This was paid into the York Union Banking Company, to be presented by the Committee for the testimonial to Mr. Hudson, but the honourable gentleman, thinking "delays are dangerous," took the money out; and applied it to the purchase of Albert-gate House, which is reported to be now for sale.—*Ibid.*, June 2nd, 1849.

PRESUMED PRESENT INFLUENCE OF MR. HUDSON'S NAME.—Some twelve months or two years ago the name of Mr. Hudson was like the philosopher's stone; it turned all to gold it touched. Behold now the other side. The Union Bank of York, of which he still continues Chairman, pays a dividend of 10 per cent., and its shares are quoted at 5 discount, while the City and County Bank in York, paying the same dividend, stands at 5 premium.—*Ibid.*, July 7th, 1849.

Mr. Hudson was never remarkable for his love of accounts. When he succeeded Mr. Glyn as Chairman of the North Midland, he was reported to have scoffed at the systematic manner in which the accounts were kept, and to have sold off lots of stationery. Good accounts are troublesome things to keep, and occasionally cause trouble to the parties of whose affairs they are registers. The true chandler's shop system is to keep no books at all. A cross for a halfpenny,

a "down stroke" for a penny, a little o for a sixpence, and a larger for a shilling, all in chalk, on a board or cupboard door, constitute the accounts of many a money-getting shopkeeper, and, we doubt not, would well suit the purposes of some of the Railways. Chalk is easily rubbed out and put in again; ink is a permanent nuisance. One great Company are reported, at one time, to have used pencil for their figures in preference to ink, which we presume must have been for the sake of convenience.—*Harporth's Railway Journal*, July 14th, 1849.

An anecdote very characteristic of Mr. Hudson in his palmy days is related of him at the Board meeting of a line which we will call the Leeds and Bradford. The honourable gentleman had allotted to himself 600 shares, and another member of the Board 200. These shares having risen to £5 premium, the latter gentleman thought he ought to have a larger number, and so said to Mr. Hudson. "I have been accustomed, Mr. ———," replied the Railway monarch, "to have gentlemen with whom I am associated satisfied with my arrangements, and if you are not, I'll retire, and leave the affairs in your hands, which I dare say you'll manage better than I do, as I have so much other business on my hands." "Oh, certainly not; by no means, Mr. Hudson," bowingly responded the crestfallen Director, "I am sure all you do is right, and I am quite satisfied with your arrangement." It is needless to say no further complaint was made by any of Mr. Hudson's colleagues at that Board.—*Ibid.*, July 21st, 1849.

Traffic between Preston Brook and Liverpool.—No. 236.

The following Table shews the Traffic forwarded by the Trustees of the late Duke of Bridgewater, for 8 years:—

Year	FROM LIVERPOOL TO PRESTON BROOK.				TO LIVERPOOL FROM PRESTON BROOK.				
	Cotton Tons.	Corn. Tons.	Groceries. Tons.	Timber. Tons.	Ale. Tons.	Hard- ware. Tons.	London Goods. Tons.	Iron. Tons.	Salt Tons.
1839	1,840	3,941	11,294	8,166	3,596	15,819	4,144	7,940	4,995
1840	2,463	10,244	10,461	7,262	5,009	11,504	3,430	7,966	2,160
1841	1,952	6,627	7,937	6,027	2,975	10,563	2,686	4,378	3,981
1842	2,877	9,511	6,325	5,458	4,175	8,513	1,556	3,278	5,467
1843	3,342	4,251	7,540	6,580	3,388	7,473	1,006	3,087	1,100
1844	2,720	10,244	8,563	6,849	3,936	7,943	1,136	13,878	1,008
1845	2,548	3,795	7,924	7,842	4,066	11,544	902	15,593	1,097
1846	2,402	7,204	9,369	8,643	5,572	11,502	618	17,448	2,867

Pilot's Evidence.—No. 237.

The following ludicrous scene took place before the Parliamentary Committee on the Tyne Conservancy Bill, on the 5th June, 1849, during the cross-examination of Roger Lawson, a pilot:—

Cross-examined by Mr. WESSER.—We have had freshes within the last month, but not very large freshes. They lift the sand very much. The freshes and the

dredges have improved the shoal at Hebburn Quay within the last month by two feet and a half water. They are working on the Howdon Pans Shoal at this time. I have known ten feet of water at low water on Jarrow Shoal; it is just as bad now as it was before, but I have not seen it since Sunday. (Laughter.) You will not catch me telling you a lie; I have not come here to tell you a lot of "muck and falsity." (Great laughter.) I have come here to speak the truth, and nothing but the truth. (Laughter.) There is now three feet three inches on Jarrow Shoal, and I have known ten feet upon it. "In coorse" steam vessels are a great improvement on the river; I have seen the day when it took me a whole week to take a ship from Felling Shore out to sea.

By Mr. WAWN.—It was the *Jane*, of Ipswich, that I took down the river on Sunday.

Mr. WAWN.—Where have you seen the dredger at work within the last month?

Witness (turning sulky).—I am not going to answer you any such question, sir. (Laughter.) Do you think I am gan to watch the dredger day and neet? Not likely. (Great laughter.) Do you think awm gan to follow the dredger (waxing into a great passion)? The dredger is nothing to me; the channel is the thing that I want. (Renewed laughter.)

The CHAIRMAN.—Has there been any improvement since Christmas?

Witness assumed an obstinate and sullen air, and refused to answer.

The CHAIRMAN.—Do you hear my question?

Witness.—What is that, sir? (Roars of laughter.)

The CHAIRMAN.—Has there been any improvement since Christmas?

Witness (sulkily).—Sometimes better and sometimes worse. (Laughter.) Ay, ye may laugh at me (casting a menacing look at the Chairman), and scorn me (roars of laughter), but aw dinna care that (snapping his finger and thumb) for your laughing and scorning; you won't get nothing more out of me. (Roars of laughter.)

Lord ARUNDEL and SURREY.—Do all the ships going down or coming up the Tyne want pilots?

Witness (getting up and walking out of the room in a sulky mood).—I wish you good day, gentlemen. (Peals of laughter for some moments.)

The CHAIRMAN.—Any more pilots, Mr. Talbot? (Renewed laughter.)

Telegraph Posts Indicators of Time and Speed.—No. 238.

To calculate the speed at which you are travelling on a telegraphed Railway, multiply by two the number of telegraph-posts you pass in a minute, by four those you pass in half a minute, or by eight those you pass in a quarter of a minute, and the result in each case will be the number of miles you are then travelling per hour—the posts being arranged thirty to a mile.

Railway Springs.—No. 239.

At the commencement of the Railway system the price of raw steel for springs was 26s. to 28s. per cwt., made from the first marks of Swedish iron, which to the "trade" is well known to be much the best for steel purposes; the labour on the spring was about the same (total, say 5½d. to 6d. per lb. for the completed spring); contracts are now taken at 22s. or 23s. per cwt.; and it is a fact that the best descriptions of Swedish irons have not been reduced more than £3 to £4 per ton, so that the finished spring sold, in 1849, much under the former price of the raw steel; and it is evident that *common* iron must be substituted for the best.

Quantity of Land occupied

The following Statement shews the Quantity of Land under Cultivation of

DISTRICTS.	1845.		1846.
	Number of Acres.	Duty.	Number of Acres.
		£ s. d.	
Barnstaple.....	23	115 17 7½	22
Bedford .....	..	....	4½
Bristol .....	..	....	..
Cambridge.....	6	23 6 2½	6
Canterbury	9,190½	66,040 5 7½	10,572½
Cornwall	2½ ¹ / ₁₆	4 6 7½	2½ ¹ / ₁₆
Derby	85	113 5 5½	68½
Dorset	9	10 7 10½	..
Essex	215	645 6 7½	222½
Gloucester.....	20	21 1 8½	19
Grantham	26½	53 11 2	26½
Hants	1,637	6,054 0 11½	1,743½
Hereford	6,597	12,054 8 1½	6,790
Hertford.....	189	762 5 1½	50
Isle of Wight	1,127½	3,837 9 1½	1,211½
Lincoln	405	587 17 9½	373
Lynn	18	11 3 9½	17
Oxford	16	17 18 7	8
Reading	7½	6 0 10½	7½
Rochester	15,697½	94,017 19 11½	16,513½
Salisbury	25½	14 6 9	26½
Salop	3	....	6
Stourbridge	317½	694 4 1½	347½
Suffolk	173½	402 18 9½	165
Surrey.....	0½	3 1 7	6½
Sussex	11,016	99,155 15 10½	12,023½
Wales, Middle.....	25½	26 12 7½	31
Worcester.....	1,224½	3,852 7 6	1,366½
	48,058½ ¹ / ₁₆	288,526 0 7½	51,948½ ⁷ / ₁₆
Old Duty, at 12 ¹² / ₂₀ per lb. ....	....	158,003 2 2½ ⁴ / ₂₀	....
New Duty, at 2 ⁸ / ₂₀ per lb. ....	....	116,784 18 1½ ¹⁶ / ₂₀	....
Additional Duty of 5 per cent., per } Act 3 Vict., c. 17.	....	13,738 0 3½	....
	....	288,526 0 7½	....

with Hops.—No. 240.

Hops in each Collection, and the Amount of Duty, from 1845 to 1848.

1846.		1847.		1848.	
Duty.		Number of Acres.	Duty.	Number of Acres.	Duty.
£ s. d.			£ s. d.		£ s. d.
268 16 7½		20½	8 12 5½	21½	139 2 11½
0 14 10½		4	....	4½	13 11 5
....		4	....	4	....
28 0 8½		6	50 14 9½	6	43 7 0½
82,857 11 7½	10,889	94,260 6 1½	9,777½	78,156 19 1	
10 1 5	$\frac{2}{100}$	1 12 11½	2	2 14 9	
613 19 5½	60½	20 7 6½	46½	269 5 2	
....	
1,201 5 1	214½	1,777 5 8	182	1,058 18 6½	
124 0 5	19	1 17 11½	19	117 12 1½	
245 15 11	26½	8 3 7	12½	62 0 0½	
18,920 8 4½	1,838	4,672 4 11	1,712½	15,273 5 9½	
51,544 1 10½	6,898	2,242 15 4½	6,304	22,315 12 6	
237 3 10½	39	306 19 6	0½	1 19 8½	
9,295 12 5	1,218	8,001 16 4	1,143	8,116 14 10½	
3,670 12 9½	35½	363 3 7½	303	1,821 13 3½	
52 14 0½	17	60 4 4	6	....
60 16 9½	9	4 16 9½	8	20 15 9½	
63 9 5½	7½	19 9 0	7½	68 15 10	
134,380 19 0½	16,961½	180,802 5 2½	16,285½	134,112 2 10½	
104 16 6½	26½	20 7 8½	18½	26 17 8½	
14 4 4½	6	3 11 0½	6	12 4 7½	
2,956 18 7½	373½	87 11 2½	337½	1,394 15 7½	
1,402 4 10½	159½	1,266 12 2½	160	914 15 9	
20 9 11	6½	10 1 4½	23½	139 14 8½	
124,147 1 7½	11,876½	100,576 11 2½	11,592½	117,471 10 10½	
134 1 2	33	6 8 9½	29	83 2 1½	
11,301 7 4½	1,287	349 2 5	1,219½	6,369 10 6	
443,657 9 2½	52,327 $\frac{58}{100}$	394,923 2 2½	49,232½	388,007 3 8½	
242,956 15 8½	....	216,268 16 7½	....	212,481 11 10½	
179,576 15 1½	....	159,850 17 6½	....	157,051 12 3½	
21,123 18 4½	....	18,803 8 0½	....	18,473 19 6½	
443,657 9 2½	....	394,923 2 2½	....	388,007 3 8½	

Cost of Working Coal Traffic.—No. 241.

The Committee of Investigation of the Midland Railway Company make the following remarks in their Report, dated 11th of August, 1849:—

Mr. Kirtley furnished his return; by which it appears that the mineral trains average 40 miles, with a nett load of 150 tons each trip. This, at 3d. per ton per mile, gives as the receipt for each train £18 15s. The estimated expenditure chargeable against the above is £6 6s. 11d., leaving as profit £12 8s. 1d.

MR. KIRTLEY'S RETURN.**ESTIMATED COST OF WORKING THE MINERAL TRAFFIC ON THE MIDLAND RAILWAY.**

The gradients of the line may be considered favourable. The cost of coke, 14s. per ton.

The average load of minerals per train is 150 tons. The average distance travelled 40 miles. Toll, 3d. per ton per mile.

Receipt per train £18 15 0

EXPENSES—

Locomotive power. 40 miles with load, and return with empties 40 miles, 80 miles @ 10d.	£3 6 8
Locomotive power, pilots' shunting trains	0 10 8
Wages to guard and stoves	0 5 0
Break-waggon, signal-lamps, &c. &c., cost £125—charge for wear and tear, and interest at 15 per cent., £18 15s. for 24,960 miles per annum, 80 miles	0 1 3
Maintenance of way and works for 1848, £70,000, and mileage of trains 4,200,000, equals 4d. per mile, 80 miles	1 6 8
General charges for 1848, £43,412 2s., proportion, 80 miles	0 16 8
	<u>£6 6 11</u>

Or, 33.84 per cent.

Mr. Hutchinson, one of the Directors, also furnished the Committee with a calculation of his own on this subject, which, although made entirely by a different method, so far corroborated Mr. Kirtley's statement as to shew the mineral traffic to be a profitable one.

The Committee also obtained another statement, shewing the amount received for the year 1848 for each class of traffic, and the actual mileage run in order to earn it. From this it appears that trains for passengers, mails, &c., produce 5s. 6d. per mile, goods trains 6s. 0½d. per mile, and minerals 4s. 8d. per mile.

1848.—RECEIPTS, EXCLUSIVE OF RENTS AND INTEREST.

	£	Miles.	Per Mile per Train.	
			s.	d.
Passengers, Mails, &c.	660,431	2,398,775	5	6
Goods and Minerals	459,883	1,637,898	5	7½
Goods only	338,271	1,117,000	6	0½
Minerals	121,612	520,898	4	8

Taking into consideration the relative cost and expense of maintaining the apparatus for each of these different kinds of traffic—that is, carriages, guards, porters, clerks, &c., taking at the same time into account that many of the mineral proprietors find their own waggons, and that all find the labour employed in loading and unloading them—it appears clear to your Committee, from this view of the subject, that the mineral pays as well as, if not better, than either passenger or goods traffic.

Quality of Railway Axles.—No. 242.

Mr. Thorneycroft, of Wolverhampton, in a communication in May, 1849, says—

The Railway system or its constitution appears to have become so corrupt at so early a period of its history, that unless something is done to reform its abuses, it may become a great evil, instead of what it might be, a great national good. In one instance where wheels and axles were ordered by a certain Company, specifying the kinds of iron should be used, the tyres were to be of a make at about £20 per ton. I saw these articles in the course of manufacture, when the parties were using, as near as I could form an opinion, about one-fourth of the make at £20 per ton, and the other three-fourths at about £10 per ton. In another instance, two makes of tyres (one at £20 and the other at £10 per ton) were placed on either end of the same axle, and after inspecting them, year after year, no difference could be discovered—those at £10 proved just as good as those at £20. When I hear a resident engineer expressing his opinion of a certain make of tyres, and condemning them in a very decided way, and in a very short time I see a letter, by this same gentleman, written to be circulated all over the kingdom, recommending these said tyres before any other make, I ask myself, is there not some cause for this sudden change? No doubt that conversation was forgotten by him, and, he may think, by others also.

And, in reply to the letter from which the above is extracted, Mr. Charles Geach remarks, in an advertisement dated “Birmingham, 29th May, 1849,”—

As evidence of Mr. Thorneycroft's own experience, I am justified in making public the subject of a correspondence I have had with the Chairman of a Railway Company, of which he and his partner were Directors, complaining of their having, as members of a sub-committee, exercised their power to supply the Company with iron of their own manufacture exclusively.

In consequence of this, some wheels and axles having been lately purchased by that Company, these two Directors charged for their own iron £657 5s. 10d., or 16½ per cent. more than the price for which the same description of articles were being at the same time sold by the Patent Shaft and Axle-tree Company, for the use of other Railways.

As a partner in the above Company I became aware of these facts, which, in my capacity of a shareholder in the Railway referred to, I exposed to the Chairman, and it resulted in the Chairman informing me that Mr. Thorneycroft's and his partner's seats in the Direction were forfeited.

Coals brought into London.—No. 243.

The following is an Account of the Quantities of Coals brought Coastwise and by Inland Navigation into the Port of London during the Years 1846 and 1847, comparing the same with the Quantities brought during the Years 1844 and 1845.

PLACES WHENCE BROUGHT.	VESSELS.				QUANTITIES.			
	1844.	1845.	1846.	1847.	1844.	1845.	1846.	1847.
	No.	No.	No.	No.	Tons.	Tons.	Tons.	Tons.
Newcastle	3,185	4,360	3,737	4,239	1,001,621	1,397,358	1,173,411	1,322,007
Sunderland	2,258	3,450	3,102	3,394	639,726	1,001,759	891,062	963,830
Stockton.....	1,966	2,688	2,347	2,807	504,823	733,043	629,011	722,789
Blythe and Seaton Sluice	313	339	401	524	76,361	85,181	90,792	105,470
Leith, Inverkeithing, Kirkcaldy, and other parts of Scotland	354	88	36	21	66,347	9,290	4,015	3,336
Swansea, Llanelly, Milford, and other parts of Wales.....	318	371	364	358	83,039	95,961	99,011	84,782
Hull, Goole, Gainsborough, and other parts of Yorkshire	945	540	261	282	94,199	58,743	25,637	22,655
Sundry Places. Small Coals, &c.	107	151	240	286	24,794	31,985	49,796	50,551
Quantity which passed the boundary stone on the Grand Junction Canal at Grove Park, Herts, and the River Thames, at Staines .....	..	..	..	..	72,286	60,310	21,872	22,005
TOTAL.....	9,466	11,987	10,488	11,911	2,563,166	3,463,630	2,975,627	3,802,425

Traffic between Liverpool and Manchester by Water.—No. 244.

The following is an estimate of the Traffic, by Water, for 12 months ending May, 1849, shewing the quantity by each Carrier :—

Thomson, Mc.Kay and Co.....	50,000 Tons.
Carver and Co.	35,000 „
Kenworthy and Co.	60,000 „
Merchants' Co.	50,000 „
William Jackson and Sons	50,000 „
Grocers' Co.	25,000 „
J. and J. Veevers	20,000 „
Jos. Nall	35,000 „
New Quay Co.	40,000 „
Old Quay Co.	60,000 „
Bellhouse and Son.....	30,000 „
Charles Clegg, }	30,000 „
John Clegg, }	
Harrington Co. }	
Barnby, Faulkner and Co.	35,000 „
Duke of Bridgewater	40,000 „
Greaves, }	20,000 „
Brookbank, }	
Bye Boats, Potatoes, &c.....	100,000 „
TOTAL	680,000 Tons.

Lowestoft Harbour in 1849.—No. 245.

The following particulars give a good idea of Lowestoft, on the Norfolk Railway, as it was in March, 1849 :—

The harbour of Lowestoft is formed by two piers projecting into the sea 1,200 feet, and enclosing an area of 18 acres, which forms the outer harbour. The entrance is 180 feet in width, and the depth at the entrance at low water spring-tides is 18 feet. The rise of tide at springs is 6 feet, and at neaps 5 feet; so that ships of 200 tons burthen can enter at all times of tide; and it is used as a harbour of refuge in gales from the north-east and south-east.

The entrance to the inner harbour is by a lock 50 feet wide, so that steam vessels measuring 48 feet over all can enter, where there is a depth of 15 feet at high water, and by closing the gates this depth is maintained.

The inner harbour is formed by Lake Lothing, and contains an area of 100 acres, with a channel $1\frac{1}{2}$ miles in length, communicating with the rivers Waveney and Yare, and forming an inland water-communication to Norwich, Yarmouth, and Beccles. It is capable of containing 200 sail of vessels, and 120 sail have at one time found shelter here.

A steam-dredging vessel of 20 horse power is now completed, and will deepen the approach to the inner harbour to 12 feet at low water, and enlarge the deep-water space both of the outer and inner harbour.

The trade chiefly consists of coal, corn, and fish, of which the following quantities were, during the past half-year, ending January 4th, conveyed on the Lowestoft line :—

Fish in packages	51,793
Corn in tons	140 19 cwt.
Coal in tons	7,022
Stone in tons	167

RETURN FROM HARBOUR DUES OFFICE, FROM 7TH MAY TO 31ST
DECEMBER, 1848.

Coals in tons	28,201½
Corn in qrs. (inwards)	557
Corn in qrs. (outwards)	25,015
Number of vessels arrived	692
Total tonnage	39,151
Amount of dues	£2,715 19 2
Working expenses	£1,163 0 0

There is every reason to expect that, when the harbour is completed, the dues will be very shortly doubled, whilst the working expenses would not be increased more than 10 per cent. on their present cost. A much larger quantity of coal will be brought in, so soon as sufficient trucks are found to convey it, and a large number of vessels will enter for refuge, when sufficient shelter is afforded by the completion of the piers of the outer basin.

LOWESTOFT HARBOUR REVENUE RECEIPTS, FROM MAY 8TH, 1848, TO
FEBRUARY 4TH, 1849.

Harbour dues, inwards	£1,951 18 8
„ „ outwards	200 4 3
Craneage, inwards	30 10 6
Wharfage, inwards	5 16 4
„ outwards	0 2 6
Steam, inwards	272 3 0
„ outwards	197 19 0
Haddescoe bridge tolls	33 3 6
Ballasting	265 12 8
Petty receipts	64 17 0
Profit on repairing vessels	78 9 5
	<hr/>
	£3,100 11 10

NUMBER OF VESSELS AND TONNAGE.

Arrived.	Tonnage.	Sailed.	Tonnage.
768	44,043	746	42,789
Imports—Coal			30,887 tons.
„ Coke			503 „
„ Corn, in quarters			620
Exports—Corn, in quarters			31,146

LOWESTOFT HARBOUR REVENUE EXPENDITURE, FROM MAY 8TH, 1848, TO
FEBRUARY 4TH, 1849.

Wages to bridgemen	£263 8 6
„ ballasting	138 5 5
„ steam tug	373 18 8
„ coal working	157 18 9
	<hr/>
Carried forward	£933 11 4

Brought forward	£933	11	4
Coal for steamers	224	16	11
Repairs	13	5	9
Cost of material and stores	55	9	7
Repairs to harbour	8	3	9
Salaries to harbour master and clerks	160	2	4
Travelling expenses	8	7	6
Rates and taxes and gas	38	2	10
Postage and stationery	10	10	5
Sundries	14	12	10
Total expenditure	£1,467	3	3
„ receipts brought over	3,100	11	10
Profit on nine months' workings	£1,633	8	7
Expended on the Railway from Reedham to Lowestoft, and on the Harbour Works to 31st December, 1848	308,011	4	5
Estimated to complete the works	30,000	0	0
	£338,011	4	5

Gold.—No. 246.

Gold in veins appears to be confined to countries of the primitive formation, and the sources from which it has hitherto been obtained in the largest quantities are the alluvial soils and beds of rivers. The west coast of Africa, Peru, Brazil, Mexico, the Ural Mountains, Siberia, Sumatra, Borneo, and now California, comprehend the principal known sources of supply. Considerable quantities have also been found in Hungary and Transylvania, and in the Rhine, Rhone, and Danube, also in Ireland and Wales in smaller quantities. The most productive sources of supply, however, in the present times, have been the Ural Mountains and Siberia, amounting last year to about £3,000,000 sterling. It is generally found there in small nodules and grains, but sometimes in large masses weighing several pounds, and in 1806 one lump was found in the Ural Mountains which weighed 26lbs., and in 1826 one of 23lbs.; but the largest mass ever known is probably that which was dug out in 1842, which weighed 83lbs., and pieces weighing 12lbs. and 13lbs. appear to have been recently found in California; and from the accounts received by every American packet, of the progress of gold-finding there, California is likely to rival the districts in the Ural Mountains and Siberia in productiveness. The Island of Borneo is another quarter from which, in all probability, very large quantities of gold may be obtained, when it becomes better explored and known. It has long supplied, in the form of "gold dust" and in small ingots, returns in barter for a considerable portion of the traffic in opium and piece goods to the small trading vessels amongst the eastern islands; and there is no doubt of the existence of considerable deposits of gold in the interior of that vast island in various localities. According to Sir Stamford Raffles, there were in 1812 as many as 32,000 Chinese employed in the gold mines of Montrada, on the west side of Borneo, who raised annually about 208,000 bingkals, equal to £936,000, the half of which was supposed to find its way to China. The enterprise natural to our countrymen will likely, before long, induce them to penetrate from Labuan and Sarawack, the points on its western coast now under British rule, to the centre or across the island in various directions, and we shall not then be at all surprised to hear of discoveries similar to what has recently been made in California.

Value of Exports.—No. 247.

The following is an Account of the Declared Value of British and Irish Produce and Manufactures Exported from the United Kingdom, specifying the various Countries to which Exported, in the Years 1846 and 1847.

COUNTRIES.	1846.	1847.
Russia, Northern Ports	1,586,235	1,700,733
" Ports within the Black Sea	138,913	143,810
Sweden	146,654	179,367
Norway	183,818	169,149
Denmark	340,318	253,701
Prussia	544,035	553,968
Mecklenburg-Schwerin	36,976	105,164
Hanover	218,111	147,357
Oldenburg and Kniphausen	25,134	26,080
Hanseatic Towns	6,326,210	6,007,366
Heligoland	101	230
Holland	3,576,469	3,017,423
Belgium	1,158,034	1,059,456
Channel Islands	414,567	542,191
France	2,715,963	2,554,283
Portugal, Proper	969,757	889,916
" Azores	57,146	42,900
" Madeira	39,358	38,853
Spain, Continental and the Balearic Islands	769,793	770,729
" Canary Islands	49,816	30,630
Gibraltar	605,693	466,845
Italy, with the adjacent Coast of the Adriatic, and the Islands, viz:—		
Sardinian Territories	474,622	355,366
Duchy of Tuscany	919,173	637,748
Papal Territories	281,516	181,694
Naples and Sicily	993,730	636,690
Austrian Territories	721,981	537,009
Malta and Gozo	255,033	195,836
Ionian Islands	171,731	143,426
Kingdom of Greece	194,029	233,913
Turkish Dominions, exclusive of Wallachia and Moldavia, Syria and Egypt	1,749,125	2,363,442
Wallachia and Moldavia	195,154	213,547
Syria and Palestine	267,618	415,292
Egypt, Ports on the Mediterranean	495,674	536,306
Tunis .....	.....	687
Algeria	25,928	18,861
Morocco	22,188	16,231
Western Coast of Africa	421,620	518,420
Colonial Territory of the Cape of Good Hope ..	480,979	688,208
Eastern Coast of Africa	5,041	13,751
African Ports on the Red Sea	350	505
Cape Verd Islands	2,505	4,145
Ascension and St. Helena, Islands of	28,309	31,378
Madagascar	2,580	.....
Mauritius	310,231	223,563
Arabia (exclusive of Aden)	7,822	.....
Aden	14,594	11,486
Persia	3,091	929
Islands of the Indian Seas, viz:—		
Java	355,009	357,670
Philippine Islands	92,806	104,466
Other Islands	2,909	307

Value of Exports (continued).

COUNTRIES.	1846.	1847.
	£	£
British Territories in the East Indies	6,434,456	5,470,105
China	1,791,439	1,503,969
British Settlements in Australia	1,441,640	1,644,170
South Sea Islands	53,724	25,368
British North America	3,308,059	3,233,014
West Indies and British Guiana	2,253,420	2,102,577
Honduras, British Settlements	252,167	170,947
Foreign West India Islands, viz.:—		
Cuba	844,112	896,554
Porto Rico	4,533	16,822
Guadaloupe	580	164
Martinique	318	196
Curaçoa	6,877	1,089
St. Croix	4,576	14,797
St. Thomas	446,317	386,599
French Guiana	1,620	....
Dutch .....	....	1,466
Hayti	136,113	192,089
United States of America	6,830,460	10,974,161
Mexico	303,685	100,688
Central America	68,500	86,983
New Granada	219,593	145,606
Venezuela	245,059	182,279
Ecuador	7,455	....
Brazil	2,749,338	2,568,804
Oriental Republic of the Uruguay	153,479	334,083
Buenos Ayres, or Argentine Republic	34,002	156,421
Chili	959,322	866,325
Bolivia	4,493	22,375
Peru	820,535	600,814
Falkland Islands	3,117	2,083
Russian Settlements on the North West Coast } of America	9,438	8,193
TOTAL	£ 57,786,876	58,842,377

Break of Gauge.—No. 248.

In the speech of Mr. Cockburn, on behalf of the Salisbury and Yeovil, Exeter, Yeovil and Dorchester, Exeter and Exmouth, and Blandford and Bruton Lines, on the 30th June and 1st and 2nd of July, 1847, which, at the time of its delivery, was regarded by Railway authorities as one of the most masterly combinations of telling facts ever pronounced before a Parliamentary Committee on the subject of a uniform gauge, as essential to the national and public interests of the country, in concluding his appeal, Mr. Cockburn says:—

It is impossible to estimate too highly the importance of the subject. We know that the welfare and prosperity of the country, and the full development of its resources and productions, depend in a great measure upon the perfect character of its means of intercommunication. And now, in modern times, for the old system of communication between one portion of the country and another, the genius of

man has substituted a great and mighty power, which, while it seems about to burst its bounds and scatter confusion and dismay around it, is yet by his intelligence converted into an instrument of power in his hands, for enabling him to pass, almost with arrowy speed, from one point to another. If you keep all in unity—if you keep all on the same uniform gauge—you have harmony in the system, and you realize all the benefits which must arise from increased facilities given to the national means of communication; but if you allow the intervention of a different system of gauge to interpose obstacles and to create delays and difficulties, you destroy the advantages which would otherwise result from this great, noble, and harmonious system. Therefore it seems to me it is a great public calamity that the daring, but in this instance erring, genius of one man should, in an evil hour, have brought in the exceptional gauge to mar the uniformity of the great system of communication of this empire. I stop not here to discuss the superiority of one gauge over another: Mr. Brunel may be wrong, or may be right,—I care not which: but the country, from one end to another, with the exception of the district into which his peculiar gauge has been introduced, is covered by a system which is acknowledged to be the national one. The resolutions of the House and the enactments of the Legislature have been directed to arrest this evil of a diversity of gauge wherever it does not already exist. Are you prepared to act according to the suggestions and views of the Legislature of which you are a component part? I believe you are; and when I shew you the disadvantages which would result to the West of England from the introduction of this gauge, and the great advantages that would result from a system of consonant and harmonious action, I am sure I am only asking you, consistently with public interest, to prevent a result which would be considered only as a national calamity.

Committees of Inquiry.—No. 249.

Proprietors of Railways, in 1849, were so exasperated at the results of the mania of 1845, that they would be satisfied with nothing but Committees of Inquiry, which were thus described by "Herapath's Railway Journal," 5th May, 1849:—

A discovery of considerable importance was made some time ago, and has been quietly acted on by certain individuals, it is hoped to their very great benefit. So very profitable is it, that it is calculated much more gold may be gathered in a week by this means than by a month or a year's picking and grubbing of the sands of the pestilential rivers of California. Pleasure and health, too, may be combined with profit. It is to buy a few shares in a Railway, then pick holes in the accounts, move for a Committee of Inquiry, keep it on for some time, and answer all inquiries by certain ominous shakes, shrugs, winks, &c. Before, or as soon as the Committee meet, sell largely of the shares; then, just before the inquiry is ended, buy in to deliver, and bull prodigiously besides. This done, bring out a good report stuffed well with hopes, as a cook stuffs her pudding with plums, and it will be the best trade going—California will be barren land in the comparison. Some say that a certain active little man, after he has pretty well satisfied No. 1, which all prudent men should look to first, intends to patent the discovery, and set up a school, to explain its wonder-working properties.

Testimonials to Persons connected with Railways.

No. 250.

TESTIMONIAL TO MR. ROBERT GILL.—This gentleman has just had presented to him an elegant dinner, dessert, and tea service of silver, with a magnificent centre-piece, of exquisite workmanship, as an acknowledgment for the services he rendered the undertaking while he was managing Director; the whole cost about £2,000. This is a testimonial of which Mr. Gill may very well be proud, especially as it is for services which were rendered some four or five years since, and given, too, at a time when Railway property is not in the most satisfactory state.—*Herapath's Journal*, 17th February, 1849.

TESTIMONIAL TO LORD TORRINGTON.—The proprietors of the South Eastern Railway, assembled at the half-yearly meeting, held March 17th, 1847, resolved—“That the proprietors are grateful to the Right Honourable Viscount Torrington for his valuable services while in office as a Director of the South Eastern Railway Company, and request the Board, before he leaves this country, to present to his Lordship some testimonial in reminiscence of the Company's obligations to him.”

Acting under the authority thus given, the Board, on the 19th April, 1847, presented to Lord Torrington a service of plate, of the value of £2,889 5s., the cost of which, as well as that of the public dinner, at which the presentation took place, namely, £342 12s., is properly charged in the accounts as part of the expenses incurred in the promotion of the North Kent line.

TESTIMONIAL TO MR. ELIAS J. MOZLEY.—On Wednesday a grand dinner was given by the dissentient Directors and Shareholders of the Birmingham and Oxford line, on the occasion of presenting a piece of plate to Mr. Elias Joseph Mozley, in testimony of the ability, zeal, and energy with which he had promoted their interest in the recent protracted contest with the Great Western Railway. The entertainment took place at the “Crown and Sceptre,” Greenwich, and amongst the company, which was strictly of a representative character, embracing many of the leading Directors and officials of the narrow gauge lines, were Lord Greenock, Mr. Glyn, Mr. T. Smith, Mr. L. Mozley, Colonel Matheson, M.P., the Hon. Captain Gough, the Hon. Captain Carnegie, Mr. Locke, M.P., Mr. Peyton, Mr. S. Thornton, Mr. Beale, Mr. A. Dobie, Mr. C. E. Stewart, Mr. Joseph Sanders, Mr. Swift, Mr. S. Carter, &c. Captain Bigge presided; and at the close of a glowing eulogy on the meritorious and successful exertions of their distinguished guest, presented to Mr. Mozley the superb piece of plate which had been subscribed for him, consisting of a gigantic candelabrum in frosted silver, with two magnificent wine-coolers, valued at between £700 and £800, which bore the following inscription:—“Presented to Elias Joseph Mozley, Esq., by those friends and fellow-shareholders in the Birmingham and Oxford Junction Railway, who witnessed with admiration, and remember with gratitude, the energy, judgment and ability displayed by him throughout an arduous and protracted struggle in defence of their common interests. June, 1849.”—*Herapath's Journal*, 21st July, 1849.

The various officers of the London and North Western, the Lancaster and Carlisle, and the Caledonian, have presented Mr. Braithwaite Poole with his portrait, at a cost of 300 guineas, and a handsome service of plate, consisting of a tea service, coffee service, and a salver. The value of the whole is 200 guineas. The salver bears the following inscription:—“Presented, with a tea and coffee service, to Braithwaite Poole, Esq., by the members of the Railway Goods Managers’

Conference, as a testimony of the great esteem in which he is held by them, and as an acknowledgment of his valuable services as originator, and for some time honorary secretary, of these useful meetings. Manchester, August, 1848."—*Railway Chronicle*, 21st October, 1848. [The above is not quite correct: the portrait was painted by Illidge, of London, for the officers and clerks of the above Railways, and cost £200; and the plate given by the goods managers of Railways, and cost £20.]

Mr. Vardy, the late superintendent on the London and North Western of the goods traffic at Liverpool, received a present of a gold watch and chain from the workmen, porters and others engaged in the carrying department. In returning thanks, he adverted to the fact that he was the person who loaded the first train of merchandise at Liverpool, which did not carry more than 15 or 20 tons, but after eight years had elapsed, when he left the Liverpool station in pursuance of his promotion, the trains carried on the average 1,300 tons *per diem*. This is one of the numerous instances of the gratitude of the men to those officers who discharge their duties in a considerate and kindly manner.—*Railway Chronicle*, 30th September, 1848.

On the 28th August, 1848, a meeting of the guards and porters of the Eastern Counties took place at the "White Hart" Tavern, Shoreditch, to present Mr. Grimshaw with a gold watch, on the occasion of his retiring from the appointment of station-master at the London terminus.

Mr. Duckray, of the London and North Western, has received a very gratifying testimonial of the esteem and respect of his brother officers and friends, in the presentation of a silver tea and coffee service, a centre-piece for flowers, and a massive salver, seven pieces in all, together worth about 200 guineas; also £500 stock in the London and North Western, purchased at par, now worth £625, and a well-painted half-length portrait, by Mr. Philips. The subscribers are to have a copy of the portrait, which is now being engraved for the purpose. The inscription on the plate recorded the date of the gift and the motives of the donors.—*Railway Chronicle*, 6th January, 1849.

The servants employed in the passenger department of the Manchester, Sheffield, and Lincolnshire presented a silver tea-service to Lieut. Gretton, R.N., the chief superintendent of the line.—*Ibid.*, 13th January, 1849.

Mr. P. Clarke, on his retirement from the Brighton, has been presented with a claret jug by some of his brother officers.—*Ibid.*

Captain Huish, on behalf of the London and North Western, presented their medical officer (Dr. Harrison) in the Manchester district, with a set of rich cut-glass castors in a silver frame, as a testimonial of his services at the late accident at Crewe.—*Ibid.*, 21st October, 1848.

TESTIMONIAL TO MR. W. EAGLE BOTT.—The engineers, solicitors, and staff of the Leeds and Dewsbury line, have presented this gentleman (the secretary and general manager of the Company) with a very handsome piece of plate, and also an epergne and purse of gold, as a testimonial "of the honourable and courteous bearing he has at all times evinced in conducting the affairs of the Company." A sumptuous dinner was given at the Scarbro' Hotel, Leeds, on the occasion.—*Hierapath's Journal*, 24th February, 1849.

TESTIMONIAL OF ESTEEM.—On Wednesday, the 29th ult., a handsome silver tea-service was presented to Mr. Thomas Kay, the goods superintendent of the London and North Western Railway, Manchester, by the clerks and others, in compliment of his recent marriage, and as a token of their esteem for him. The

testimonial was presented by Mr. Adahead, who, in doing so, passed a warm eulogium upon the merits of Mr. Kay, observing that the present was the result of the united contributions of his friends, who could not allow so interesting an event as his recent marriage to pass by without manifesting their regard for his character. The testimonial would have been much more valuable had not the committee somewhat reined-in the expression of the feelings of the contributors, their object being, not to present a splendid offering, but something that, while manifesting their sincere attachment, should be useful to him in his new capacity as house-keeper.—Mr. Kay feelingly acknowledged the kindness of his friends, who had taken him at unawares. To do justice, to act uprightly, unflinchingly, and without compromise, to discharge the duties of his office, would be his object through life; and in accepting this token of their esteem, he desired to express his thanks, not only on his own behalf, but on that of Mrs. Kay. He trusted that he should always continue to merit their good-will through life. In the evening a goodly company sat down to supper at the "Royal Archer," Dale Street: Mr. W. G. Cooke presided, and Mr. William Occleston occupied the vice chair. Harmony prevailed, and the party broke up at an early hour, each one being pleased with the evening's enjoyment.—*Macclesfield Courier*, 1st September, 1849.

PRESENTATION OF PLATE TO JOSHUA P. WESTHEAD, Esq.—The handsome subscription of the shareholders of the Manchester and Birmingham Railway Company, and other gentlemen, for a splendid service of plate to Joshua Proctor Westhead, Esq., the Chairman of the Manchester and Birmingham Railway Company till its absorption into the London and North Western Company, for his unceasing labours in its behalf, and as a tribute to his public and private worth, was long since promptly filled up, and the service of plate furnished; but a variety of circumstances have prevented its presentation till last Tuesday (16th June, 1847), when this superb testimonial was formally presented to Mr. Westhead, at a splendid entertainment given to that gentleman in the music saloon of the Albion Hotel, Piccadilly, Manchester, which was tastefully decorated for the occasion; its chief ornament, however, being the costly and very elegant service of plate, which was displayed at the lower end of the room on a stand constructed for the purpose, covered with and canopied over by rich purple velvet. This complete dinner-service numbers nearly 380 pieces, consisting of nearly 3,000 ounces of silver, and, we believe, cost about £2,000. The principal or centre piece is a splendid candelabrum, consisting of a triangular pedestal on tripod base, from which spring the branches for lights and the central basket for flowers or fruit. At each foot of the tripod are three Cupid-like figures, emblematical of Genius, Mercury, as the swift-winged god, with his caduceus, &c., and Science; and at the three angles of the pedestal are three adult figures—Atlas supporting the globe on his shoulders, and the others representing Perseverance and Wisdom. From the centre of these figures (which, as well as the smaller ones, are exquisitely modelled in frosted silver) springs the double stem of an oak tree; and above the heads of the figures a chaplet of acorns and oak leaves encircles the stems. Above this wreath the stems ramify into nine branches, supporting as many lights; while a central continuation of the stem is surmounted by a handsome basket of burnished and frosted silver, for the reception of flowers or fruit. On Tuesday it was filled with the choicest flowers. On the front panel of the triangular base, which is all of polished silver, is the following inscription:—"This candelabrum and a dinner-service, of the value of 1,800 guineas (the original amount, since augmented to £2,000), was presented to

J. P. Westhead, Esq., by the shareholders of the Manchester and Birmingham Railway Company, in grateful acknowledgment of his unceasing labours on behalf of that Company; and also by others, his fellow-townsmen, as a tribute to his public and private worth.—January, 1847.”—*Railway Times*, June 19th, 1847.

TESTIMONIAL OF ESTEEM.—On Thursday last, the clerks and porters (of the merchandise department only) of the Manchester and Birmingham section of the London and North Western Railway Company, presented to Mr. Samuel Salt, the manager thereof, as a mark of esteem, a very handsome candelabrum, bearing the following inscription :—“ Presented to Samuel Salt, Esq., manager of the merchandise department, Manchester and Birmingham section, London and North Western Railway, by the clerks and porters engaged under him, as a token of their esteem for his high integrity, great abilities, and uniform kindness.” The clerks and porters assembled in the warehouse; Mr. Thomas Kay presided, and, under pretence of urgent business, sent for Mr. Salt, who, upon entering the room, was greatly surprised at seeing all the servants together. After he had been conducted to a seat, Mr. Kay, in a very neat and appropriate address, presented him the candelabrum, and a gold pen and seals. He observed it was a sincere token of honest affection—a spontaneous free-will offering of all those present. His integrity was conspicuous; with him, merit met its reward, and misconduct (without any partiality) its punishment. His great abilities were manifest by the manner in which he conducted the business of this line of Railway; regularity and order were its characteristics. His uniform kindness was the source of the testimonial which stood before him, and which those around him confirmed. (Loud and hearty cheering.) Mr. Salt arose, and for some time his feelings overcame him. So sudden, so undeserved, he said, was this splendid gift, that he did not know what to say in reply. His duty to the Company, and to them, he had endeavoured faithfully to perform. Nothing, he hoped, would ever cause him to swerve from that principle. Persons of merit he marked out for reward; but no consideration ever had, and he hoped never would, induce him to wink at delinquency. He received this testimonial with great pleasure, believing it to be a free-will gift. He highly appreciated their kindness towards him; but he should have been proud, even had it been conveyed to him in a less flattering manner. The times were hard, and he was sure many must have made a sacrifice of some private nature to produce such a testimonial. After disclaiming the exclusive merit attributed to him, and speaking of the ability and attention with which the business of the department generally was performed, he again returned them his thanks, and said that he should always look upon that testimonial with feelings of lively interest. After a hearty round of applause, the assembly dispersed, each to his own duty.—*Manchester Guardian*, June 3rd, 1848.

Ought Canals to do their own Towage?—No. 251.

The following occurred at the half-yearly meeting of the Regent's Canal Company, held 6th June, 1849 :—

Mr. Baxendale, Mr. Green, Mr. Mayhew, and Mr. Balldon, expressed dissatisfaction at the course adopted by the Committee in taking the towage of the canal into their own hands, instead of letting it to contractors or leaving it to private competition, but it was shewn most satisfactorily by Mr. Parker, Mr. Radford, and other gentlemen connected with the Company, that the advantages gained by the

increase of traffic more than counterbalanced the expense incurred in the management of the haulage. Prior to the Company taking the towage into their hands, 70 horses were employed by the traders on the canal, but the whole of that work was performed since by the Company with 50 horses. The receipts, during the year preceding the adoption of towage by the Company, ending 31st March, 1847, amounted to £28,865, but on its adoption, in the year ending 31st March, 1848, the receipts amounted to £37,132, being an increase of £8,267, while the expense of towage was only £5,600. During the year ending 31st March, 1849, the receipts amounted to £34,340, and the expense of towage to £5,600. This, it was contended by Mr. Green, shewed a loss of £1,600 per annum, but on the part of the Company it was equally contended that there was a profit of £47, owing to the persons employed in the towage performing that duty as well as the duty of servants, which the Company would otherwise have to keep as police to protect the property, and should, therefore, be allowed for in the calculation.

Cost of the Cambridge Station.—No. 252.

The Cambridge Station, on the Eastern Counties Railway, was built by Mr. S. M. Peto, and cost as follows. The works were not done by contract, but by measurement and valuation, according to plans by Mr. Thompson and Mr. Hunt. The prices fixed were 10 per cent. under those of the Board of Works, and measured by Mr. Hunt:—

	£	s.	d.
For erecting refreshment room, and extending the platform, &c. . .	5,627	1	11
For the new Up station, with platforms and roofing over line	14,262	17	3
For alterations to ditto	1,020	6	2
For temporary platform, and covered way on the Up line (now removed)	275	18	6
For carriage shed	387	19	9
For additions to the old engine-house (now removed)	393	6	8
For coke platforms	69	19	0
For new engine-house	6,347	1	8
For building goods shed, No. 2, and enlarging the old shed, No. 1 . .	1,772	15	3
For building goods shed, No. 3	1,754	13	11
For the extension of ditto	1,425	3	7
For forming the stable	76	16	8
For forming the sidings, providing and laying the rails, &c., forming approach roads, with fencing, &c. &c.	6,698	1	5
For extending the several sidings for carriages, goods, and engines, with additional fencing	4,369	9	2
For building switchmen's boxes	129	10	6
For forming coal wharf, carriage dock, fixing buffer stop, altering and re-fixing fences, and sundry works about station	932	0	1
For forming siding for the accommodation of Mr. Headley	419	13	11
For building porters' cottages	2,175	14	4
Ditto ditto cottage at Mill-road	259	17	5
For purchase of land for ditto	40	0	0
Carried forward	£48,441	7	2

Brought forward.....	£48,441	7	2
For sundry day-work about the station, up to 1846.....	368	0	7
Ditto, and sinking well, &c., up to 1848.....	3,823	18	3
Ditto, ditto, 2nd account	206	16	3
For gas fittings to new refreshment room	74	18	0
Return of carriage of materials.....	556	4	8
For sundry works to the lodge at Trumpington, and sinking well ..	172	9	2
CONTRACTORS—SWINBURNE AND Co.			
For glass supplied for the works of the new Up station, &c.....	1,184	7	1
CONTRACTOR—A. TOY.			
For gas-fittings to the new Up station.....	558	14	11
CONTRACTORS—WENTWORTH AND Co.			
For furniture to the new refreshment room	272	8	2
Total	£55,659	4	3

The above is exclusive of the formation of the main line through the station, and also of the cost of the original station building, engine-house, goods warehouse, cattle pens, sidings, well, steam-engine, &c., executed by Mr. Jackson, under the direction of Mr. Borthwick and Mr. Thompson, which was as under:—

	£	s.	d.
Office building for Down station, colonnade to approach, and covered way Down line, site, &c. &c.	10,840	19	3
Goods warehouse	1,168	17	3
Cranes and weighing machine	182	0	0
Engine-house	858	10	5
Tank, steam-engine, pump, cistern and hose, 40 feet long	451	0	0
Carriage-houses	490	17	0
Cattle pens, coal station, and goods yard	334	5	0
Approach road and fore court, including carriage and horse landings	932	11	10
Works on line, engine pits, and drainage	187	18	6
Water mains, water cranes, and large weighing machine.....	342	17	6
Permanent way, exclusive of main line and turn-tables.....	4,879	9	6
Buildings	748	10	8
Cranes and weighing machines	10	10	6
Water machinery.....	171	13	1
Cattle pens, &c., No. 1	164	4	5
Ditto ditto No. 2	127	9	4
Yards, approach roads, &c.	1,873	14	9
Sidings and turntables, &c. &c.	1,198	8	1
Sundries.....	7	0	0
	£24,893	17	1

Unparalleled Legislation.—No. 263.

The Committee on the Dublin Improvement (No. 2) Bill commenced their labours at 11 o'clock yesterday morning, and continued their sitting until 2 o'clock this morning, in order to pass the bill. Let it not be said hereafter that the Legislature pass lightly over measures for the benefit of the sister country.—*Times*, 14th July, 1849.

A Judge in a Dilemma.—No. 254.

A few days since, one of the judges of the county courts for the western district was on his way to open his monthly court, and had arrived so far as Bristol by Railway, when having occasion to leave the carriage in which he had travelled for a few minutes, he unfortunately mistook the carriage, and entered the wrong one, and in a short space of time was whirled back to Swindon station before he was aware of the error he had committed, thus entailing on himself the expense of a special train, to be in time to hold his court.—*Morning Post*, July, 1849.

Cost of Cotton.—No. 255.

Every bale of cotton costs the producer an average of 2 dollars per bale for overseer's wages; 2 dollars 50 cents for pork; 1 dollar 50 cents for clothing.

In sending bales to Liverpool, from New Orleans, they cost each—

	dol. c.
For bagging, rope, and twine, per bale	2 50
For freight, insurance, commissions, and other shipping charges in New Orleans	2 50
For freight, insurance, duties, town and dock dues, commissions, and other charges in Liverpool	14 00
For plantation expenses, (which include clothing, pork, farming utensils, horses and mules, &c., which must be furnished every year) not less per bale than	6 00
For overseer's wages and necessary repairs of gin and mill, not less per bale than	2 50
Making the aggregate expenses equal to, per bale	27 50

A bale of cotton weighs about 400 pounds.

During the year 1838 there were imported into the ports of Great Britain—

	Bales.
From the United States of America	1,124,180
From Brazil	137,480
From East Indies	108,780
From Egypt	29,460
From West Indies, Demerara, Smyrna, &c.	30,900
Total	1,430,700

The following will shew the quantity and value of cotton crops in the United States for several years. Each year ends September 30th. The calculations of the first years are from the *New York Express*,

Year.	Bales.	Average price per pound.		Total Value.
		Cents.	Dollars.	
1824-5	560,000	20		47,040,000
1830-1	1,088,848	9		37,398,628
1835-6	1,360,825	19		103,415,100
1837-8	1,801,497	11		79,265,858
1839-40	2,177,835	10		87,113,400

The total cotton crop of the United States, for the year ending the 30th September, 1840, was 2,177,835 bales, an increase over 1839 of 817,302 bales, and shewing the largest cotton crop ever raised in the United States, by nearly 400,000 bales.

Of the produce of the year 1839-40, namely, 2,177,835 bales in the United States, 1,876,003 bales were exported, thus:—

	Bales.
To Great Britain (1839-40)	1,246,791
To France	447,465
To North of Europe	103,232
To other foreign ports	78,515
Total	1,876,003

The exports of the previous year, 1838-9, were 1,074,689 bales, and the quantity consumed at home 281,998 bales. The quantities of cotton exported to foreign ports from each of the United States ports in 1839-40, were—

	Bales.
New Orleans	832,625
Natchez	2,208
Alabama (Mobile)	354,708
Georgia (Savannah and Darien)	207,950
Florida	61,049
South Carolina	247,501
North Carolina	65
Virginia	7,987
Baltimore	2,501
Philadelphia	3,685
New York	152,216
Boston	3,508
Total	1,876,003

Great Western Railway praised.—No. 256.

Mr. Russell, M.P., Chairman of the Great Western Railway, made the following remarks, at a meeting on the 17th August, 1848:—

You are aware that there is no Company in this kingdom (I say so with confidence) that affords so large an amount of accommodation as we do. The number of trains, and the number of miles run by us, are infinitely greater than those run by any other Company whatever—there is no Company in this country that gives the same accommodation by express trains, either in the time in which they perform their duty, or with respect to the class of persons who are enabled to travel by them. There is no Company in the kingdom that gives the same convenience to the public in the way of return tickets. Upon other lines, it is true, return tickets may be obtained, but then there are so many difficulties and obstructions connected with it, that it is hardly available for the purposes for which it has been obtained—viz., for a single day only. On the Great Western line those who require to travel a short distance have the advantage of travelling by all the trains, while those going a considerable distance have two days, and others going to the further portions of the line are allowed three days, for the use of the ticket, exclusive of Sunday.

The Amount of Silver and Gold in Europe.—No. 257.

The calculations by Mr. Jacob, as continued by M. Berghans down to 1835, give the following results:—

In the year 1600	£136,000,000
„ 1700	297,000,000
„ 1835	380,000,000

In 1819, the gold of the Ural Mountains was discovered. In the year 1846, the quantity of gold delivered at the mint of St. Petersburg amounted to 1,722 poods, 29lbs. 87 solotnik, which, at £3 17s. 10½d. an ounce, exceeds £3,000,000. Within ten years Russia has increased the bullion of Europe by £18,761,310. Mr. Jacob estimated the metallic currency of Europe at £313,000,000. What is the annual consumption of gold in Europe? France is the only country in Europe whose commercial statistics can help us to answer this question. From the yearly official publication, entitled *Tableau General du Commerce de la France*, it appears that from 1829 to 1841, during thirteen years, France required, for her own consumption in plate and money, an annual average supply of gold and silver to the amount of 106,130,591 francs, or £4,245,223 sterling. Mr. Jacob, in 1831, estimated the annual consumption of the precious metals in Great Britain, for all purposes, except money, at £2,457,221; the annual waste by loss and wear of money has been estimated at £200,000; which would make the annual consumption of the British Islands £2,700,000. It would be an error to suppose that the average of France and Great Britain would be the average consumption of the rest of Europe. But, probably, when their consumption is compared with their populations, and their populations with those of all Europe, the consumption of Europe cannot be estimated at less than £20,000,000 a year. What is the amount of the annual supply of the precious metals to Europe? The sources of the supply are the United States, Spanish and Portuguese America, and Russia, and the annual average amount is, from all sources, about 12,000,000. According to the best authorities, the following are the general results in round numbers:—Amount of the precious metals in Europe, £400,000,000; annual consumption in plate and coin, £20,000,000; annual supply, £12,000,000. The positive waste from loss and abrasion being small; though the consumption exceeds the supply, the total of the precious metals accumulates yearly.

Wealth of the United States.—No. 258.

The report of the Patent Office, made in 1848, presents interesting statistics relative to the wealth of the Union. The population of the United States is set down at 20,744,000, and the aggregate of personal and real property, estimated at 8,294,570,000 dollars. New York is the richest State, her property being 912,000,000. Pennsylvania next, 850,000,000; then Ohio, 740,000,000; then Virginia, 508,000,000. The remainder of the States rank as following:—Indiana, 384,000,000; Tennessee, 380,000,000; Kentucky, 342,000,000; Massachusetts, 340,000,000; Illinois, 294,000,000; Alabama, 276,000,000; Mississippi, 256,000,000; South Carolina, 242,000,000; Missouri, 240,000,000; Maine, 240,000,000; Maryland, 193,000,000; Louisiana, 188,000,000; New Jersey, 167,000,000; Michigan, 148,000,000; Connecticut, 132,000,000; Vermont, 120,000,000; New Hampshire, 120,000,000; Arkansas, 60,000,000; Texas, 56,000,000; Iowa, 52,000,000; Rhode Island, 52,000,000; Wisconsin, 36,000,000; Delaware, 32,000,000; Florida, 32,000,000; District of Columbia, 18,000,000; Oregon, 8,000,000.

Great American Lakes.—No. 260.

Ontario is 234 feet above the level of the sea, 180 miles long, 50 wide, and 500 feet average depth; but near the centre, no bottom was found with a line of 350 fathoms. Erie is 230 miles long, from 80 to 60 broad, but only 60 feet deep, and 564 feet above the sea. Huron 250 miles long, 180 broad, 860 feet deep, and 594 feet above the sea. Michigan is 300 miles long, 55 wide, 900 feet deep, and on a level with Huron. Superior is 460 miles long, 410 wide, 627 feet above the sea, and 900 feet deep.

The Caspian Sea, a vast Lake of Asia, is 600 miles long, and 300 broad, in the widest part. The waters are partly salt.

Cost of the Ely Station.—No. 261.

The Ely Station, on the Eastern Counties Railway, was built by Mr. S. M. Peto, and cost as follows. The works were not done by contract, but by measurement and valuation, according to plans by Mr. Thompson and Mr. Hunt. The prices fixed were 10 per cent. under the Board of Works prices, and measured by Mr. Hunt:—

	£	s.	d.
The station building, with platforms, and roofing over same, and over sidings	10,503	2	3
Carriage shed	101	18	10
Temporary tank (now removed)	238	3	11
Tank house and tank	772	19	3
Engine house	454	4	9
Additions to old goods shed	1,080	3	3
Office in goods sheds	67	15	8
Grain shed next the river	945	6	5
Grain shed, No. 1	1,302	2	9
" No. 2	847	11	4
Additional granaries	2,770	14	5
Sack room in sheds	45	19	2
Porters' shed next dock	33	11	6
Shed and covered way for barges	489	11	10
Stable and cart shed	183	19	8
Cattle pens	659	1	2
Additions to ditto	64	16	9
Fencing adjoining ditto	108	2	3
For piling, &c., to the dock next river	1,584	13	10
For pumping engine house	3,125	15	3
Forming embankments and timber viaduct, providing and laying rails, forming approach roads, fencing, &c., &c.	8,145	1	9
Ditto, ditto, including providing and fencing turn-tables, piling under station buildings, and additional goods under sheds, granary, pumping, engine house, and under turn-tables, piling to dock, and maintenance of rails, &c.	37,064	17	11
Ditto, ditto, buffers, and fencing next lodge	80	19	10
Switchmen's boxes	214	17	11
Carried forward	£70,835	11	8

Brought forward.....	£70,835	11	8
Drainage	267	2	1
Paving approach road to station	154	7	4
Sundry temporary works	121	0	10
Sundry day works up to 1846	154	9	11
Ditto ditto, 1848	2,382	4	7
Purchase of additional land	5,258	0	0
For bracing Cross Water bridge after the opening of the line	98	13	4
Alteration of Cutters bridge	113	11	6
Return of carriage of materials	675	6	10
CONTRACTORS—SWINBURNE AND Co.			
For glass supplied for station, &c.	936	18	5
CONTRACTOR—A. TOY.			
For gas fittings, &c.	513	13	6
Total	£81,511	0	0

The above is exclusive of the formation of the main line through the station, and also of the cost of temporary station, goods warehouse, carriage shed, sidings, &c., steam engine, &c., executed by Mr. Peto, under the direction of Mr. Borthwick and Mr. Thompson, which cost as follows:—

	£	s.	d.
Booking office	789	6	5
Porters' rooms	277	17	11
Locomotive office.....	744	6	3
Goods shed	479	11	11
Carriage shed, platforms, and fencing	687	12	5
Locomotive engine-house	2,131	0	6
Pumping engine house for locomotives	565	16	4
Coke platforms at Cutter	300	8	3
Embankments, roads, and permanent way, exclusive of main line, &c.	5,254	12	4
Day account	168	2	0
Furniture	143	15	11
Gas	207	5	3
Machinery	262	12	0
	£11,912	7	6

Euston Station, London, in 1849.—No. 262.

The structure on the exterior is of the plain Roman style of architecture, and is 220 feet long by 164 feet in width. At the southern front there are five entrances, over which extends for a considerable distance from the face of the building a capacious awning, under which carriages may draw up and passengers alight without being exposed to wet or any other inclemency of weather. The outer doors lead into what is called the "outer vestibule," which is 22 feet in depth and 64 feet in width, and having a very beautifully-designed mosaic pavement, constructed of what is called the patent metallic lava. On the northern side of the "outer vestibule" are again five other entrances, leading into the grand hall, or vestibule.

On entering the grand hall from the outer vestibule, the visitor is suddenly introduced to an apartment which perhaps for space and elegance of design has not its equal. The length of this magnificent hall below the entablature is 125

feet, the width 61 feet, and the height from the floor to the ceiling 62 feet. At the northern end is a grand double stone curved staircase leading to the central flight, by which a beautiful gallery 16 feet in width is reached. The entire length of the hall, from the wall of this gallery to the southern wall, is 139 feet. The roof is supported at the northern end by four double columns, and at the southern end by four single corresponding columns, each 24 feet 7 inches in height, without the base. These columns are highly finished, and represent beautifully polished red granite. They are of the Ionic order, and the caps and bases represent white marble. The roof is exceedingly light, chaste, and elegant, the ceiling being what is termed a coffered ceiling, that is, a continuation of exceedingly large panels, bearing various ornamental designs, the prominent borders of which spring from enormous elaborately designed brackets, supported upon lions' heads, all round the upper portion of the structure.

The mouth of each lion holds a ring, by which are suspended beautifully arranged bunches of fruit and flowers. This magnificent hall is lighted by a large number of attic windows, ranged on the eastern and western sides, above the entablature of the order. The grand staircase at the northern extremity of the grand hall leads to a second gallery or vestibule, connecting the grand hall with the general meeting-room for shareholders. This is reached by a large door in the centre, between the double row of columns already described. Over this door is an exceedingly bold and elegantly designed *bas relief* by Thomas, the sculptor, engaged under Mr. Barry, at the New Houses of Parliament. This *bas relief* consists of the figure of Britannia, seated with her left arm resting on the head of a stupendous lion, whilst at her left is the prow of a ship. On the right she is supported by a figure the size of life, representing the Arts and Sciences, and on the left by a figure of Mercury of equal size. On a level with this vestibule is a light and elegant gallery, connecting all the offices of the establishment, passing round the entire of this great hall. The building was designed by Mr. Philip C. Hardwick, and constructed by Messrs. William Cubitt and Co., at a cost of £150,000.

The Queen Travelling by Railway.—No. 263.

The "Railway Chronicle," of the 7th October, 1848, thus describes the Queen's journey from Aberdeen to London:—

Between London and Aberdeen there are no fewer than six Railways allied with the London and North Western in policy, and associated with it in management. These lines have the advantage of being under the direction of Messrs. Locke and Errington as engineers throughout for 400 miles north of Birmingham, and of Mr. Robert Stephenson for the remainder of the distance to London.

These lines are as follows:—

Aberdeen	18 Miles.
Scottish Midland	33 "
Scottish Central	45 "
Caledonian	105 "
Lancaster and Carlisle.....	90 "
London and North Western	209 "

Total of the Queen's journey.....500 Miles.

When it is known that over this distance Her Majesty was conveyed, without

any previous notice, at the rate of 35 miles an hour, including stoppages—at a rate amounting to, but not exceeding at any time, 50 miles an hour, over a country rising twice to an elevation of 1,000 feet above the level of the sea, and descending, at intermediate stations, nearly to the level of the sea, and so conveyed without the slightest alarm or cause for danger—we may be permitted to say that the Railways of England, under their present system of management, have reached an amount of perfection, regularity and security unsurpassable, and almost unhopd for.

The incidents of the journey, divested of the exaggerations and errors of local statements, are as follows:—On the morning of Friday, the day of the intended embarkation, a dense fog shrouded the mouth of the harbour of Aberdeen, and extended far along the coast, presenting an evident source of danger to Her Majesty in the voyage by sea. About 12.30 p.m. intimation was sent to the engineer, Mr. Errington, who happened to be at Aberdeen, of Her Majesty's intention to change her route. Mr. Ker, the assistant engineer, was instantly despatched by coach to Montrose, being the extreme northern point from which at present the Railway communication is unbroken. From this point to Carstairs Junction, on the Caledonian, the trains were arranged by Mr. Errington; from thence to Crewe by Mr. Locke; and from Crewe to London by Mr. Trevithick.

From Montrose to Perth the arrangements had to be made only half an hour before the Queen's arrival, and it was a wet, foggy night; but she was taken without hindrance the 50 miles under two hours. Notice was sent forward from Perth to Carlisle in the night. The train was clear away from Perth about half-past ten on Saturday morning; and the run to Carlisle, 150 miles, with four stoppages, was accomplished in 4½ hours. At Carlisle the Queen rested a short time, and the train was clear away at 3 p.m., arriving at Crewe at 7 p.m., making four stoppages—that at Lancaster being of some duration, to receive an address from the corporation. The highest running speed was about 50 miles an hour. Next morning, Her Majesty started from Crewe at 7 a.m., arriving in town at 10 a.m. The Queen was conveyed in the same carriage throughout, being an ordinary first-class carriage belonging to the Aberdeen Company. The train consisted of six carriages and trucks; and of necessity (as there was no time for any especial provision) the locomotive and every other service was of the ordinary description furnished to the public and in daily use.

Express Trains.—No. 264.

Express trains have been generally introduced (perhaps, indeed, too generally of late), for it is notorious that a train travelling at a much higher speed than that of the other trains, is of all other arrangements the most likely to cause derangement to the rails. On almost all lines on which there are express trains, ordinary trains have to wait at a siding to let the express pass; if the express is late, as is every now and then the case on a long line of Railway, there will be two or three trains, containing passengers and merchandise, kept waiting in sidings for it, and the whole regularity of the traffic will for hours be deranged. It is evident that in such cases express trains, far from adding to the aggregate accommodation afforded by the Railway, must diminish that aggregate. Still, an English public will always feel an interest in anything like a race, and we accordingly find the different rates of the express trains a common subject of interest.

Distances between American and English Ports.—No. 265.

As the Old and New Worlds are now brought comparatively near to each other by the power of steam navigation, the following Table of Distances, as run per chart by the steamers, in geographical miles, between New York and the English ports, will doubtless be interesting.

NEW YORK TO LIVERPOOL.		Miles.
To Cape Clear		2,748
Cape Clear to Tuscar		150
Tuscar to Skerries		90
Skerries to Liverpool		60
Total		3,048
NEW YORK TO BRISTOL.		
To Cape Clear		2,748
Cape Clear to Bristol		275
Total		3,023
NEW YORK TO PORTSMOUTH.		
To the Lizard		2,962
Lizard to Portsmouth		200
Total		3,162
HALIFAX TO LIVERPOOL.		
To Cape Clear		2,200
Cape Clear to Tuscar		150
Tuscar to Skerries		90
Skerries to Liverpool		60
Total		2,500
Boston to Halifax		350
		2,850

Smuggling Tobacco.—266.

In the port of Liverpool the smuggling is chiefly on the article of tobacco, which comes direct from America; but the smuggling in the ports of London, Hull, Newcastle, &c., is in various goods. So far as tobacco is concerned, it is chiefly an article which has been in the bonded warehouses of London or Liverpool, and which has been exported to Dutch or Belgian ports (free of duty) to be smuggled back to England by the engineers, stokers, stewards, and seamen of the numerous steamers plying to and fro.

Mr. Davis, a tobacco broker in London, whose firm had been 150 years in the trade, and who, the year before giving evidence to the Tobacco Committee of 1844, had paid on account of the merchants and dealers and for whom the firm were brokers, about a million and a half sterling to the government in duty (being over one-third of the whole tobacco duty paid in the kingdom), stated that he was prepared to support his evidence relative to extensive smuggling, and the hardly less extensive collusion or negligence of the revenue officers, by the production of various persons who had been largely engaged in smuggling. The conditions were, that their name should only be known to the Parliamentary Committee, not to the public. He put in a statement thus:—

"A called on B, and offered to bring home to his house, from bond, six cases of Manila cheroots, weighing each 144lbs., on B paying £200. B declined this, fearing to lose the cheroots, on which A promised that if B would pay £240, A would guarantee the safe delivery, and deposit £300 three per cent. stock with B to hold, as collateral security for the safe delivery, which was done. Various operations on this plan, amounting to thirty cases within seven months, by one party, were effected in London. Loss to revenue £2,090. In these instances, the officer on board was bribed to the amount of £20 to £50, according to quantity."

This transaction was effected by the cases of cheroots being cleared from the bonded warehouse for exportation. They were placed in a lighter to be put on board a ship lying in the river. Outside the dock-gates another lighter was lying, with dummy packages in it, similar to the cases of cheroots. The two lighters come into collision, as if by accident. The revenue officer in charge of the genuine cases, while the lighters were bumping against one another, and their crews probably quarrelling as to which lighter was in the wrong, stepped nimbly from that which carried the dummies. He was rowed alongside the ship, the dummies were put on board that ship, and the cheroots were landed at some of the wharfs. By that step from one lighter to another the officer earned his £20, £40, or £50. B told A that, as he could effect the landing of the cases in two days, as he had done, he might afford to do so for less than £240, the sum stipulated for; but B said, "Oh, it's not all profit, I have two or three to pay."

How soon will Money double itself?—No. 267.

If a sum of money be put out at interest, and the interest be convertible into capital at the time it becomes due, the sum will double itself in the times shewn below under the specified conditions:—

		Years.
At 5 per cent., payable yearly, it will double itself in		14,2067
"	half-yearly	" 14,0355
"	quarterly	" 13,9494
At 4½ per cent., payable yearly,		15,7473
"	half-yearly	" 15,5759
"	quarterly	" 15,4897
At 4 per cent., payable yearly,		17,6730
"	half-yearly	" 17,5014
"	quarterly	" 17,4150
At 3½ per cent., payable yearly,		20,1488
"	half-yearly	" 19,9770
"	quarterly	" 19,8907
At 3 per cent., payable yearly,		23,4498
"	half-yearly	" 23,2779
"	quarterly	" 23,1914

Grass growing on Railways.—No. 268.

We have heard, says the *Cardiff and Merthyr Guardian*, 7th July, 1849, of grass growing in the streets of decayed towns, but never till now on Railways; such, however, is the fact on the line from Exeter to Crediton, where, during the past week, hay-making has been in full operation. This line, which was constructed three years since, is, owing to a dispute between the broad gaugers and the narrow gaugers, still unopened for traffic, though there is, perhaps, scarcely another in the kingdom better situated for it.

Cost of the Peterborough Station.—No. 269.

The Peterborough Station, on the Eastern Counties Railway, was built by Mr. S. M. Peto, and cost as follows. The works were not done by contract, but by measurement and valuation, according to plans by Mr. Thompson and Mr. Hunt. The prices fixed were 10 per cent. under the Board of Works prices, and measured by Mr. Hunt:—

	£	s.	d.
Amount of account for erecting the station buildings, with the platforms (now removed), goods shed, and engine-house (both occupied by the North Western Company), and forming sidings under the direction of Mr. Borthwick.....	12,975	3	11
Additional station buildings, two new platforms, and roofing over rails.....	13,226	3	8
Refreshment rooms.....	3,980	8	8
Carriage shed.....	241	16	11
Goods shed for the Eastern Counties Railway.....	3,979	13	5
Additions to goods shed for the North Western Railway.....	757	17	1
Stable and cart shed.....	109	3	8
Addition to cattle pens.....	167	11	1
Two engine-houses, with smiths and fitters' shops, tanks, &c., for the Eastern Counties and Midland Railways.....	12,129	6	10
Additions to North Western engine-house.....	118	3	5
Forming sidings, providing and laying rails, turn-tables, &c., forming roads, fencing, &c.....	27,330	19	2
Sundry engineering works.....	4,015	0	7
Switchmen's boxes.....	283	7	1
Two lodges at level crossings.....	119	16	10
Officers' residences.....	2,458	2	2
Porters' ditto.....	3,055	0	8
Gas fittings in refreshment room, engine-house, &c.....	1,926	5	6
Sundry day works.....	1,606	10	11
Return of carriage of materials.....	422	19	4

SWINBURNE AND CO.

For glass supplied for refreshment room.....	54	2	10
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BENNETT AND CO.

For enlarging the goods shed.....	2,515	1	1
For building engine-house in the occupation of the Great Northern Railway.....	1,862	2	7
For new refreshment room on arrival platform.....	200	0	0

£93,234 17 5

The above is exclusive only of the main line through the station, and of the works done under the direction of the resident engineer.

Cost of Engine Power for Working Coal Trains.—No. 27^o.

The following is a Return of the Cost per Mile of the Repairs and Maintenance of the Locomotive Engines on the Pontop and South Shields Railway, and of the Average Cost of each Chaldron of Coals conveyed by the Locomotives during the Years from 1835 to 1848 inclusive, and the Value of the Engines at the end of each Year.

DATE.	Miles run by the Engine.	Chaldrons Led.	Annual Cost of Repairs.			Original Cost of Engines employed.			Value of Engine at each period.			Cost per Mile run.	Cost of each Chaldron.
			£	s.	d.	£	s.	d.	£	s.	d.	d.	d.
January, 1835	...	...	...	...	...	6,700	0	0	...	...	...	...	...
December, 1835	59,132	86,663	866	8	6	...	...	...	6,064	0	10	3-52	2-11
January, 1836	71,492	100,597	1,376	8	6	...	...	...	5,339	6	8	4-62	3-28
December, 1836	...	...	...	...	...	9,300	0	0	...	...	...	...	...
January, 1837	80,140	120,266	1,272	17	5	...	...	...	7,104	10	10	3-81	2-54
December, 1837	...	...	...	...	...	10,900	0	0	...	...	...	...	...
January, 1838	90,134	126,235	1,833	10	1	...	...	...	7,764	6	8	4-88	3-48
December, 1838	...	...	...	...	...	14,940	19	7	...	...	...	...	...
January, 1839	91,170	151,336	2,630	14	11	15,885	19	7	11,500	2	0	6-92	4-17
December, 1839	...	...	...	...	...	...	...	...	...	...	...	...	...
January, 1840	100,584	182,400	3,395	11	4	...	...	...	12,553	10	10	8-10	4-46
December, 1840	104,418	192,458	2,990	16	3	...	...	...	12,177	12	6	6-87	3-73
January, 1841	117,198	224,392	3,344	8	10	...	...	...	11,631	13	3	6-85	3-38
December, 1841	121,698	234,110	2,357	0	1	...	...	...	10,649	6	7	8-12	2-66
January, 1842	123,444	232,800	3,891	18	2	...	...	...	10,377	6	2	7-57	4-01
December, 1842	124,966	239,304	3,207	19	6	...	...	...	11,260	9	5	6-17	3-22
January, 1843	127,080	217,080	3,428	5	8	...	...	...	11,670	10	0	6-47	3-79
December, 1843	132,414	272,322	4,685	11	2	...	...	...	12,780	4	11	7-38	4-13
January, 1844	166,374	289,331	5,024	18	2	...	...	...	13,451	17	4	7-22	4-17
December, 1844	...	...	...	...	...	...	...	...	...	...	...	...	...
TOTAL	1,530,524	2,681,294	40,546	8	7	...	...	...	Average	...	...	6-35	3-63
	1,239,926	2,235,533	35,197	4	1	Averages, omitting first 4 years.						6-87	3-78

Cotton Statistics.—No. 271.

In 1641. The first mention of cotton, the soft and beautiful vegetable substance forming the covering or envelope of the seeds of the *gossypium* or cotton plant, as an article used in manufacture, appears in a small treatise, entitled the *Treasure of Traffic*, written by Lewis Roberts, author of the noted book, the *Merchant's Map of Commerce*, in which treatise it is stated, that "the town of Manchester buys the linen yarn of the Irish in great quantity, and weaving it, returns the same again to Ireland to sell; neither doth her industry rest here, for they buy cotton wool in London that comes first from Cyprus and Smyrna, and work the same into fustians, vermillions, dimities, and other such stuffs, which they return to London, where they are sold, and thence not seldom are sent into foreign parts, which have means on far easier terms to provide themselves of the first material."

1690. About this time the art of calico printing was introduced into England from France. It ranks amongst those advantages which England gained by the revocation of the edict of Nantes, by Louis XIV., in 1685.

1693. A prescriptive claim, set up by the lord of the manor, for a duty of two-pence per pack on all goods sold within the manor, is defeated.

1696. By an indenture bearing this date, it appears that the fee with an apprenticeship to a Manchester manufacturer, was £60, serving seven years.

1701. The town of Liverpool rises rapidly into importance, and first forms the port of Manchester.

1761. The import of raw cotton was 1,985,868 pounds, the export of cotton goods being £33,263.

1780. Mr. Wyatt spins the first cotton yarn in England by machinery.

1786. The Dutch first export cotton from Surinam.

1788. The mode of *spinning by rollers* further improved by John Wyatt, and a patent taken out in the name of Lewis Paul, his partner.

1740. The agency system commences, and cotton weaving extends into the country.

1740. About this time Manchester merchants began to give out warps and raw cotton to the weavers, receiving them back in cloth, and paying for the carding, roving, spinning, and weaving. Guest says, "the weaving of a piece, containing twelve pounds of eighteenpenny weft, occupied a weaver about fourteen days, and he received for the weaving 18s.; spinning the weft, at ninepence per pound, 9s.; picking, carding, and roving, 8s."

1743. East India yarns used in Lancashire, up to this period, for the finer kind of goods.

1743. The import of cotton wool amounted to 1,132,288 lbs. The quantity retained for home consumption, 1,091,418 lbs.

1749. The import of cotton wool amounted to 1,658,365 lbs. The quantity retained for home consumption, 1,827,367 lbs.

1759. Manchester begins to grow into celebrity for its cotton manufacture: the entire value of the cotton goods made was £200,000 per annum.

1761. Arkwright obtained the first patent for the spinning frame.

1761. The first English "Navigation Canal," extending from Worsley to Manchester, is opened June 17th. It originated with Scroope, Duke of Bridgewater, called the "Father of Inland Navigation in England."

1764. Cotton markets first opened abroad. At this time the trade of Manchester was greatly pushed by the practice of sending out riders for orders all over the kingdom, carrying with them patterns in bags.

1764. The following table of cotton wool imported, and cotton goods exported, contrasted with similar tables of more recent date, will prove an extraordinary record:—

COTTON WOOL IMPORTED.		COTTON GOODS EXPORTED.	
1697.....	1,976,359 lbs.	1697.....	£5,915 Official Value.
1701.....	1,985,868 "	1701.....	23,253 "
1710.....	715,008 "	1710.....	5,698 "
1720.....	1,972,805 "	1720.....	16,200 "
1730.....	1,545,472 "	1730.....	13,524 "
1741.....	1,645,031 "	1741.....	20,509 "
1751.....	2,976,610 "	1751.....	45,986 "
1764.....	3,870,392 "	1764.....	200,354 "

1770. The manufacture of gingham, &c., is greatly improved by the inventions of Mr. Meadowcroft.

1773. James Hargreaves applies the contrivance of a crank and comb to take wool off the cards in a continuous fleece.

1773. The manufacture of calicoes introduced about this time.

1774. An act of Parliament, by which a duty was imposed on printed, painted, and stained cottons, declares the manufacture to be lawful.

1779. Mule spinning invented by Hargrave.

1789. The manufacture of muslins introduced.

1780. The import of raw cotton was upwards of 6,700,000 pounds; and the export of cotton goods was £355,060.

1782. A panic was created in Manchester by the circumstance of 7,012 bags of cotton having been imported between the months of December and April.

1782. First import of cotton from Brazil into England.

1783. Power looms invented by Dr. Cartwright—Steam-engines used in cotton factories.

1784. The "Fustian Tax" imposed on the suggestion of the Right Hon. William Pitt. Great consternation was excited by this act in Manchester and the neighbourhood; 15 houses, employing 38,000 persons in different branches of the cotton trade, petitioned against it; and the master dyers and bleachers announced, that "they were under the sad necessity of declining their present occupations until the next session of Parliament."

1785. The "Fustian Tax" repealed through the endeavours of Mr. Thomas Walker and Mr. Thomas Richardson, who were presented with a silver cup each. Splendid processions upon the occasion, May 17th.

1785. The privileges of the spinning-jenny, which had partly been thrown open in 1783, were, in this year, wholly given to the public, when cotton mills began to increase, as well as the population.

1787. Muslin manufacture rises into note through mule spinning, and 500,000 pieces are manufactured in Great Britain.

1787. Steam-engines first introduced into the Lancashire cotton factories, by Messrs. Peel, at Warrington.

1787. The value of exported cotton goods, in this year (immediately after the overthrow of Arkwright's patent), amounted to £1,101,457.

1788. East Indian and North American cotton first imported.

1788. A meeting was held in Manchester to consider the great depression of our cotton manufactures, arising from the "immense importation of Indian goods;" and government was solicited to allow a drawback as an encouragement to the

export of English products. It was estimated that the cotton manufacture employed 159,000 men, 90,000 women, and 101 children.

1789. Sea Island and upland cotton first planted in the United States.

1789. The first steam-engine for spinning cotton erected in Manchester. The improvements made in the steam-engine by Watt, and the various inventions, each contributed to advance the extent of the trade. The quantity of goods produced was augmented thirty-fold.

1790. The cotton spinners of Lancashire and Scotland solicited permission of the government to create themselves into a "Company of Traders," with privileges similar to those enjoyed by the East India Company, with whom, it seems, they considered themselves otherwise unable to compete.

1790. The import of raw cotton was 31,500,000 pounds; and the value of cotton goods exported was £1,662,369.

1790. Slaton, an Englishman, builds the first American cotton factory, at Pawtucket, Rhode Island.

1790. It was mentioned as an extraordinary fact, that Manchester paid in postages £11,000, being a larger amount than any other provincial town.

1790. Messrs. Grimshaw, of Gorton, erected a factory at Knot Mill, for the introduction of power-loom into Manchester, but the experiment did not succeed.

1792. Eli Whitney, an American, invents the cotton gin, which he patents.

1800. Quantity of cotton wool imported was 56,010,732 pounds.

1814. The declared value of all the woollen, silk, and cotton goods exported from Great Britain was £14,658,442.

1815. The power loom introduced into the United States, first at Waltham.

1815. The export of twist legalised by Parliament, at which time the consumption of cotton amounted to 99,306,343 pounds, increased in two years to 124,912,968 pounds.

1817. The number of spindles in Great Britain are estimated at 6,545,833, and the number of operative spinners at 110,763, by Mr. John Kennedy, of Manchester.

1820. The import of cotton wool for home consumption was 152,829,633 pounds, the duty on which amounted to £426,957 11s. 3d.

1822. First cotton factory in Lowell erected.

1822. The New Quay Company began by Mr. John Brettargh and two others, with a capital of £30,000.

1823. The import of cotton into Great Britain was 187,231,520 pounds, of which 171,993,160 pounds were imported into Liverpool, and may, therefore, safely be said to have been consumed in and about Manchester.

1823. There were 2,500 looms employed on silk, and about 3,000 on mixed goods.

1826. Self-acting mule spinner invented in England by Roberts.

1830. The number of yards of goods printed in Great Britain was 130,053,520; the amount of capital in the trade was 56,000,000, employing 330,400 persons in factories alone.

1832. The quantity of cotton wool imported was 283,000,000 pounds.

1832. A new throstle frame invented by Mr. Robert Montgomery, of Johnston, Scotland.

1832. There were from 12,000 to 14,000 looms, and ten throwing mills, giving employment to about 3,000 hands.

1833. The import of cotton wool was 303,656,837 pounds, and the duty £473,011.

1834. The quantity of cotton retained in England for home consumption was 295,624,997 pounds. The export of cotton yarn amounted to 76,478,468 pounds. The quantity of yarn spun in England was 241,731,118 pounds.

1835. The declared value of cotton manufactures exported was £15,306,922; and of yarn £4,704,823.

1835. The quantity of cotton retained in Great Britain for home consumption was 330,829,834 pounds. The export of cotton yarn amounted to 82,467,886 pounds. The total quantity of yarn spun in England was 248,114,531 pounds.

1835. According to the Parliamentary return, the total number of power-looms employed in the manufacture of silk, in Manchester and Salford, was 300. The total number throughout the United Kingdom was 1,716.

1836. Of 63,623 persons employed in mills in the parish of Manchester, 35,283 were females; 37,930 were above the age of 18 years, and 16,965 were below the age of 15.

1836. The amount of steam power employed in the various branches of manufacture in the Parliamentary boroughs of Manchester and Salford was,—Manchester, 7,926½; Salford, 1,998; total horses' power, 9,924½.

Large Passenger Engine.—No. 272.

The large passenger engine Mr. Mc'Connell has had constructed at Wolverton, under his own eye and from his own design, was tried in January, 1849. She has 18-inch cylinders; 21-inch stroke; 6½-foot driving wheels; connecting rod, 6 feet 6½ inches between centres; 190 tubes, 2 inches in diameter, 12 feet 6 inches long, on six wheels; area of fire-box, 136·341 square feet; area of tubes, 1,243·510 square feet; total heating surface, 1,379·851 square feet; area of fire-grate, 23·25 square feet; extreme centres, 17 feet 2½ inches.

Cost of Broad Gauge.—No. 273.

"An Occasional Engineman" thus writes to "Heraclitus's Journal," in October, 1848, respecting one of its details:—

Permit me to call attention to a fallacy which one of your correspondents falls into as to a supposed economy in the eight-wheeled engine of the Great Western, for the ordinary work of a Railway. He imagines, because the repairs of these new engines are slight, that they are economical; but he forgets that they cost far more and weigh more than the old engines, and that on this additional cost and weight, interest and depreciation must accrue,—call the excess only £1,000 per engine and tender, that is, there is in each engine and tender £1,000 worth more of iron, copper and brass in a highly wrought state. For interest and depreciation on this at least 20 per cent. must be allowed; 20 per cent. is £200 per annum; $200 \times 20 \times 12 = 48,000$ pence. Say you can get 40 miles per day, all the year round, out of an engine, that is 14,600 miles per annum; $48,000 \div 14,600 = 3\text{d.}$ per mile per engine. Now the whole repairs of narrow-gauge engines, quite capable of doing the ordinary work of the line to which your correspondent would apply the eight-wheeled engines, vary from 2d. to 4d. per mile run. * * * According to Mr. D. Gooch, of the Great Western Railway, a train, with the same number of passengers, weighs on the average 65 tons gross on the broad gauge, and only 40 tons on the narrow, and that this additional 25 tons consists of very expensive and perishable materials, they will find, on working this sum out, that a charge of from 6d. to 1s. per train per mile is chargeable against the broad gauge on this score only. As the whole expenses of a train per mile run should not exceed 3s., and the fares often do not exceed 5s. per mile, we see what an enormous tax this is.

Progressive Speed of Railways.—No. 274.

The following Tables shew the increase of speed in the Express, and the average as compared with 1843. The lines are arranged in the order of their speed :—

EXPRESS SPEEDS ON THE METROPOLITAN RAILWAYS.

In 1843 (July).

Name of Railway.	Speed in Miles per Hour.	Remarks.
London and Brighton	28·8	Narrow gauge.
Great Western.....	27·4	to Beam Bridge—broad gauge.
South Eastern.....	26·6	to Folkestone—narrow ditto.
London and South Western....	25·4	to Gosport— ditto ditto.
Eastern Counties	25·1	to Colchester— ditto ditto.
London and Birmingham.....	23·6	Narrow gauge.

In 1848 (June).

London and South Western....	44·5	to Southampton—narrow gauge.
Great Western.....	43·8	to Exeter—broad gauge.
South Eastern.....	35·2	to Dover—narrow ditto.
London and North Western....	34·9	to Liverpool—ditto.
London and Brighton.....	33·6	Narrow gauge.
Eastern Counties.....	31·3	to Cambridge—narrow gauge.

AVERAGE SPEED OF ALL THE THROUGH TRAINS (EXCLUDING THE EXPRESS) OF THE METROPOLITAN RAILWAYS.

Railways.	No. of Trains.	Miles per Hour.	Remarks.
Great Western.....	7	25·4	Broad gauge—one third class.
London and South Western	8	23·9	Narrow gauge—two do. trains.
Eastern Counties.....	6	23·3	Ditto, one ditto.
London and Brighton	9	23·1	Ditto, two ditto.
South Eastern.....	6	22·7	Ditto, two ditto.
London and North Western	7	22·4	Ditto, one ditto.

I have distinguished in the column of remarks the broad-gauge line (the Great Western) from the others, because there appears to be an impression, on the part of a portion of the public, that the rate of travelling by express trains is greatest on that line: this opinion, it will be seen, is not borne out by the facts. It should be borne in mind, in considering this question, that speed, as measured in the usual way of so many miles per hour, becomes of less value as regards saving of time as the velocity increases; for instance, the difference (3 miles per hour) between 50 and 53 miles per hour, only makes a difference of seven minutes in accomplishing a journey of 100 miles; but the same difference of 3 miles per hour, between 20 and 23 miles per hour, makes a difference, in the same journey of 100 miles, of no less than 39 minutes.—*Harding's Facts and Progress of the Railway System.*

Directors Speculating in Shares.—No. 275.

At a meeting of the South Eastern Railway, 17th May, 1849, Mr. Thomson complained of certain share transactions between the Chairman and Deputy-Chairman, and said,—

"To comment upon this would be superfluous, and I proceed to the letters." He then proceeded to read the following extracts from letters from Mr. Macgregor to Mr. Pritchard :—

"London Terminus, March 28th, 1848.—Mr. Brown is gone to arrange with M'Crae. I must decline being a party to any more of these transactions. I have neither time nor strength to attend to them. Mr. Herbert has opened a credit for No. 4's, and writes you accordingly."

"June 1st, 1848, London.—I think Brighton's will be lower than S. E.'s. Attend to No. 2 and 3's, and provide for them with the others."

Letter posted at Cheltenham, August 8th, 1848 :—

"It seems to me the No. 1's are not attended to."

And at the same meeting Mr. Cunliffe said,—

"I therefore submit the following extracts from the Chairman's letter to the Deputy-Chairman, for your consideration, that you may be enabled to judge for yourselves whether or not the Chairman was a participator in transactions which I deem contrary to law, to the Company's Acts, and to public policy." He then read the following extracts :—

"January 7th, 1848.—Things are very much better, as you will see, and the market will now require careful watching."

"March 22nd, 1848.—The state of markets requires no comment. I have a note from Scott, who says markets are decidedly better to-day. Keep me advised. I am persuaded a certain gentleman peaches. However, that does not signify much now, in the present situation of madam and her affairs. I gave Scott an order to buy 200 No. 1's at 10 dis., and sell 200 paid-up at 23½; but he could not do both, and that was the condition. He has done 150, and says the Bears have oversold themselves in shares."

"March 23rd, 1848.—This is my only letter northward, so do your best."

"March 24th, 1848.—Things are better in shares to-day. I have done nothing, but think you have done wisely. Keep people bandaged; they will want it. Scott says the call has been discounted, and has no adverse effect on the market. The steam-boat meeting has had a favourable effect on people's minds, whether it does good to their pockets or not."

"March 25th, 1848.—It is not right to tell me in a private letter about share operations, without sending regular purchase and sale notes, that I can shew and hand to other people; so pray, whatever has been done, or is to be done, send a formal letter of advice, and purchase and sale notes."

"March 28th, 1848.—If you find a vent for the No. 4 shares before the account day, without loss, so much the better."

"June 3rd, 1848.—I have your note. Of course you advise Herbert. What you do, the less the better, for he can make it answer."

"June 30th, 1848.—I have your two notes of yesterday; one of them enclosing purchase notes for 135 No. 1, 185 No. 2, and 150 No. 3 shares; and have advised the Liverpool Commercial Bank to honour your drafts for £8,650 5s. The total

number of 'old' shares there were for sale was 879—viz., 654 J. B., and 225 D. A. F. I shewed the purchase notes to Mr. Browne, and he desired me to say that he hopes you have not purchased any more shares, as the amount already exceeds the possible proceeds of the old shares."

"July 7th, 1848.—There is another place now requiring as much looking after as London Bridge."

"August 8th, 1848.—It seems to me the No. 1's are not attended to."

The Eastern Counties Committee furnished their proprietors with a statement of the dividends paid, and which ought to have been declared. Your Committee have given you no such information. I have endeavoured to supply it, and I believe the following statement will be found pretty nearly correct:—

Half-year ending.	Dividend paid.	Dividend earned.
July 31st, 1847	21s.	about 9s.
Jan. 31st, 1848	21s.	„ 9s.
July 31st, 1848	21s.	„ 9s.
Jan. 31st, 1849	16s.	under 8s.

exclusive of depreciation of rolling stock. (Hear.)

Gun Trade of Birmingham.—No. 276.

Previous to the year 1804, the number of hands engaged in the trade was comparatively few, but that in that year "they were enabled to supply 5,000 stand of arms monthly. In 1809 Government was supplied with 20,000 stand of arms monthly. In 1810 the number was increased from 28,000 to 30,000 monthly; and the number was regularly supplied until the peace of Paris." An Act of Parliament empowering the erection and maintenance of a Government proof-house, in which all gun-barrels were required to be tested previous to delivery to the trade, was passed in 1813; and since then the manufacture of fowling-pieces, pistols, &c., has both increased and improved. To such an extent has the division of labour been carried in this trade, that a finished fowling-piece will frequently combine the labours of at least twelve distinct businesses; one tradesman, perhaps, forging the barrel, another "boring" it, and a third "browning" it. To give some idea of the extraordinary manufacturing capabilities of Birmingham, it may suffice to state, that a few years ago a French order for 140,000 muskets was executed in seven months; and that it is estimated that, during the great war-time, Birmingham produced "at the rate of a musket per minute throughout the year." Mr. Charles James Smith, who is one of the most active of the present generation, has brought out some revolvers of unheard-of ferocity,—rifles with "magazine self-priming locks discharging forty times with once priming." In his visit to Birmingham, in 1844, his Royal Highness Prince Albert, whose interest in manufacture is as lively as it is intelligent, inspected the splendid establishment of Messrs. Sargeant, and expressed himself delighted with all that was exhibited to him. The invention, about forty years ago, of the percussion lock, caused a complete revolution in the gun-trade.

Gambling in Shares in 1845.—No. 277.

It is one of the most extraordinary signs of the times, that during the present week it has actually been necessary for the magistrates of Leeds to employ the police to keep the footpaths clear, in the streets where the Stock Exchanges are situated, so great is the crowd of speculators standing there during the hours of

business. The more respectable share-brokers are themselves alarmed, and are exerting themselves to repress the mania for gambling in shares. At a meeting of the members of the Stock Exchange, held on Saturday last, Mr. Ridsdale, the senior share-broker of the town, and chairman of the Exchange, addressed the following judicious and excellent remarks to his fellow-members :—He considered it his duty, as chairman, to call their attention to the present position of the share-market, and to the immense extent to which speculation was now carried, causing in every reflecting mind alarm and anxiety for the consequences. He cautioned them to observe the utmost care as to the principals with whom they dealt, reminding them, that though the amount of their brokerage might be large, and their business, apparently, exceedingly profitable, the responsibility involved in it was frightful in extent, and that a sudden reverse in the market, which a single week's wet weather might occasion, might produce serious consequences. He urged them to repress rather than to foster the speculative spirit of the times, and especially to discourage the prevalent practice of *bear* sales, or sales made by persons not actually holding the shares sold, in expectation of a fall in price. This he considered a most dangerous business, and one especially to be deprecated, as giving entirely a fictitious value to the shares so dealt in. He also recommended to the members the propriety of discontinuing all transactions in shares of which the scrip certificates were not already issued, as brokers thereby were involved in very heavy liabilities, of which they could not rid themselves till the issue of the scrip took place, which was often delayed for many weeks.—*Leeds Mercury*, August, 1845.

American Itinerary.—No. 278.

Eastport to Portland, 231 miles; Portland to Boston, 145; Boston to New York, 207; New York to Philadelphia, 89; Philadelphia to Baltimore, 115; Baltimore to Washington, 38; Washington to Richmond, 122; Richmond to Norfolk, 122; Norfolk to Wilmington, 268; Wilmington to Charleston, 151; Charleston to Augusta, 136; Augusta to Mobile, 540; Mobile to New Orleans, 164. Total, 2,328 miles.

New York to Albany, 145 miles; Albany to Buffalo, 363; (Buffalo to Niagara Falls, 23;) Buffalo to Detroit, by lake, 317; Detroit to Chicago, by lake and land, 286; Chicago to Galena, 161; Albany to Montreal, 252; Montreal to Quebec, 171.

Philadelphia to Pittsburg, by railroad and canal, 394; Pittsburg to Cincinnati, 466; Cincinnati to Louisville, 143; Louisville to Mouth of Ohio, 363; (Mouth of Ohio, up Mississippi, to St. Louis, 176;) St. Louis to Galena, 348; St. Louis to Kansas River, 375; Mouth of Ohio to Vicksburg, 604; Vicksburg to Natchez, 106; Natchez to New Orleans, 321; New Orleans to Sea, 114. Total distance from Pittsburg to New Orleans, 2,003 miles. Louisville to Nashville, 524; Charleston to Savannah, 118; Savannah to St. Augustine, 309.

Fares for Ladies less than Gentlemen.—No. 279.

The Lancashire and Yorkshire Company announced, in June, 1849, a series of cheap trips, during the summer months, to Blackpool and Fleetwood, for which they signified their intention of charging females and children "half-price." This is the first instance that we remember of ladies being charged a less fare than gentlemen for Railway travelling.

Extraordinary Railway Meetings.—No. 280.

At a meeting of the Eastern Counties Railway, held in London, 10th May, 1849, the following remarks were made, according to the newspaper reports:—

On the arrival of Mr. Waddington, M.P., and the Directors, unearthly groans, hisses, shouts of contempt, scorn, and derision, mingled with cries of "Shame," "Out, out," "Pay us our dividend," and many other suitable exclamations, were heard, differing according to the conflicting feelings of individuals, and, from the almost uninterrupted chorus of unearthly noises which proceeded from the meeting throughout the business, it is impossible to give a clear account of the discussion.

The CHAIRMAN (Mr. Waddington), amidst continued groans, hisses, and uproar, mingled with one or two cheers, attempted to address the meeting, but was received with such a storm of groaning, hissing, laughter, hooting, and howling, that, for a length of time, he was unable to speak a sentence.

Mr. CASH, at the same time, jumped on the table and gesticulated, and called on the meeting to hear Mr. Waddington, till he succeeded, after great efforts, in securing a slight lull in the tempest.

Mr. WADDINGTON was understood to say, in the partial calm which ensued,—Gentlemen, I am not at all sorry that it has fallen to the lot of Mr. Meek to address you this day before I have done myself the honour of addressing you. (Laughter.) To appeal to you as Englishmen to listen to a man, who, though he may be under a ban now, yet feels that before he sits down you will thank him for having risen—(Confusion)—Gentlemen, I do not stand here for my own aggrandisement—(Loud laughter, and cries of "Sit down")—but I stand here—(A voice: "How about the £2,000?")—I stand here in a painful position—"No doubt you do."—I say, it is most painful to think that one with whom I was formerly on the most intimate terms of brotherly friendship—"Oh, oh," and laughter)—it is painful for me, I say—(Groans, hisses, and cries of "Sit down, sit down," accompanied with such general interruption that the hon. gentleman found it impossible to bring his sentence to a termination.) * * I feel that if the gentleman of whom I was speaking were to review what has since passed, no one could feel more deeply for you than he; but I am sure also that that gentleman, from the large stake he held in the concern, felt confident that he would ultimately be able to land you in a different position from that in which you now are—"Oh, oh," laughter, and "How about yourself?") I will not stand here and shield myself by saying that I am not guilty, and that all the guilt rests with him. (Cheers.) * * * I did object to any accounts being made out, having found that Mr. Hudson, who had anticipated a large increase of revenue from the Peterborough line—"Question")—had miscalculated the resources of that line—"Question," and a voice: "Why don't you speak about yourself?") Is it not the question—Is it not the vital question?—whether our concern is earning anything or not? The Eastern Counties has paid its own way. ("Oh.") If you will not listen to me—if you'll not hear me,—("No.") Very well, gentlemen, take your own course, I will endeavour to do my duty. If you will not—(Cheers, "oh," and groans)—if you will not listen to the statement, I have no wish to go on. I ask you, as an act of justice, to hear me—(hear); I claim it as a right, but I will not ask it as a favour. (Cheers.) * * * I have not relied on my own figures in the matter; I am not going into the question with a view

— As he "Why don't you clear your own character?" But, gentlemen—"Oh, oh, oh, oh." * * * * The hon. gentleman the Chairman of the committee asks us where the money was to come from? That is a question which I suppose he wants me to answer. Hear, hear, and "Yes." I can only say that the dividend was arranged for payment. Whether subsequent proceedings here may have prevented that arrangement from being carried out it is not for me to say, but I repeat it had been arranged for payment. ("How?" "That is the statement I have to offer on this point. "How was it to be paid?" I say that arrangements had been entered into to obtain the money for the purpose. (Several propertors—"But how?" "Why, by borrowing the money. "We thought so;" laughter, hisses, and groans. If any gentleman fancies that this undertaking could be kept on without sustaining its credit and borrowing money, he is much mistaken. Nervous laughter, "Sit down." I don't want to disguise the facts. "Oh, oh." You shall know them. I will not disguise anything now, though we might have done so before. "Yes." In the estimate which has been constructed by Mr. Bask, he says, "we threw out a bait to the shareholders." I say—"Oh, oh." What is the meaning of the term "bait?" (A laugh.) It was our duty to give you an account of what we thought you had realised, and so on. With all due deference to the committee, I don't wish to impute to them motives. "Oh, oh." I am not doing so. * * * * I will not speak of Mr. Bask's courtesy. I ask no courtesy from him, but I do question the policy of making this meeting the medium of running down any man, be he Chairman, Director, or Shareholder. "Oh, oh," and hisses. Gentlemen, if you have patience, I will trouble you for only a very few minutes, and, as this is probably the last time I shall have the honour of addressing you—(tremendous cheering)—I will grant me a very small portion of your time. * * * No gentleman much has been said respecting the £2,000. I know that a resolution was passed, and I know that I received the money. (Loud hisses and cries of "Oh.") * * * * Previous to their appearing in that room this day, the Board had come to the unanimous resolution that they would resign—cheers—and he, Mr. W., now offered the proprietors their resignation. (Renewed cheers.)

Amidst the uproar that followed this announcement, Mr. OWEN moved, and Mr. LOVE seconded, "That a criminal information be laid against Mr. Hudson, and also that a Bill in Chancery be filed against Mr. Waddington and all the Directors of the Eastern Counties Railway." The motion, however, was not put.

Mr. Waddington and his colleagues retired amidst the hootings of the shareholders, and an indescribable scene of uproar and confusion ensued. The remaining business was transacted under the influence of the greatest excitement, groaning, roaring, hooting, and yelling, rendering it utterly impossible that any gentleman at a distance from the table could understand what was going forward.

The Editor of "Herapath's Railway Journal," of the 12th May, 1849, says:—

To give a description of the conduct of the meeting on Thursday is utterly impossible, for there are not words in the English language to convey a competent notion of it. Its attendance was large, and its proceedings were turbulent in the extreme. Surely never before was there such a meeting. The Committee were received with hisses, and so were the Directors; the one party apparently for denying a dividend, the other for giving it. Still we think a great many hissed

the Committee believing them to be Directors. They happened to enter the room first, and hisses greeted their entrance.

When Mr. Waddington rose to speak, the confused war of words, the shouts, the hisses, the jeers, the groans, the yells, the execrations, began.

During the proceedings we were much amused at the witticisms and observations of Mr. Joshua Wilson on the various speakers. Scarcely one got up but he had some laughable observation to make on him. To Mr. Waddington, who said he had a great respect for Mr. Cash, he called out, "It was the Cash without the Mr." Then, when they vociferously interrupted Mr. Waddington, he cried out dolefully, "Oh! pray hear the last speech of the Chairman!" To another, who said he was in possession of the chair, "How can that be," said he, "when you are on a stool?"

As an instance of what some called the "cool impudence" of the Chairman, when the meeting was hooting, yelling, and groaning at him, he quietly commenced sucking an orange.

And at a meeting of the Eastern Counties Railway, 15th June, 1849, the following remarks were made:—

Mr. Glynn rose, (but it was a long time before he was favoured with a hearing Mr. Helps and others contesting the honour) and said—as to his being a civil engineer, he had been principally employed in improving the fen-lands of Lincolnshire and Suffolk, as was well known to Mr. Fryer, who had been chairman of two commissions having that object. (Much disturbance.) As a member of the Committee of Investigation, he had acted with much earnestness, and he might be allowed to say, with much industry, as Mr. Meek very well knew. (Hisses.) They had heard the eloquence of the honourable gentleman—the vituperated eloquence, he might call it. (Cries of "No, no," "Hear, hear," and other noises, which drowned the remainder of the sentence.) They had for months been listening to these speeches; and, in the meantime, the business of the Company had been stopped. (Here the clamour was such, that the honourable gentleman sat down, amid loud cries of "Christie.")

Mr. CHRISTIE accordingly presented himself, but was at first not well received. He said he could bear testimony to the powerful eloquence of Mr. Meek, but he must say that that gentleman had shewn a very great amount of carelessness in his statements. (Tumult.) Day after day had the committee been engaged in the investigation of the Company's affairs; and for himself he would state, that it was a most painful duty to make inquiries which resulted in attaching so much discredit to Mr. Hudson, the late chairman, and still more so to Mr. Waddington, the deputy-chairman. (Groans, and cries of "Question.") For his own part he had dealt very severely with the deputy-chairman. (Loud laughter.) They should remember, that to be brought before the bar of a meeting of shareholders, was somewhat different from being placed at the bar of the Old Bailey. (A voice: "He ought to have been there," and much disturbance.) When he put it to Mr. Waddington, as a gentleman and man of honour—(prolonged hissing, groans, and laughter)—when he put it to Mr. Waddington that that gentleman—(cries of "Oh, oh")—should give every assistance and information to the committee, he at once agreed to do so. (Laughter.) There were, however, two ways of obtaining information; and he, for one, preferred seeking it in a friendly, instead of a hostile spirit. (Cries of "Sit down," "Question," &c.)

In the midst of a perfect whirlwind of turbulence, Mr. Helps again essayed to make himself heard, but in vain. At length,

Mr. D. PRICE rose to nominate a third list of Directors, stating that it emanated from the "Shareholders' Protection Association." He objected to Mr. Margrave, as connected with the City Saw Mills. [A voice: "He may perhaps supply the Company with saw-dust." (Laughter.)] The names were variously received—those of Mr. Meek, Mr. East, and Mr. Fryer being the most popular. The name of Mr. Box was hailed with shouts of derision. Mr. Price concluded by denouncing the conduct of Mr. Duncan, the solicitor, whom they had dismissed—(Loud cries of "No, no")—who, at any rate, had retired—(cries of "He resigned") in acting professionally in carrying through Parliament the Bill for the Norfolk Amalgamation.

A PROPRIETOR: And quite right, too! (Hear, hear, and laughter.)

Some amusement was created when, upon the Chairman asking who seconded the motion, Mr. Price enquired of Mr. Fryer if he would do so, and that gentleman declined. At last a seconder was found in Mr. S. LOW.

Mr. LAWLEY (who had, on three or four previous occasions, tried to gain a hearing) rose to nominate, as he said, an independent candidate. The gentleman whom he had to propose was Mr. Hows. (Loud laughter, and cries of "Sit down.")

Mr. NATHAN.—He is a pawnbroker; put him "up the spout." (Cries of "Shame, shame," and much disturbance.)

The Chairman then left the chair, and Mr. Colman was proposing a vote of thanks to him, when Mr. Helps got upon the platform and assumed the chair—by whom proposed or seconded we could not, in the din which prevailed, ascertain.

What followed surpassed in farcical absurdity anything we ever before witnessed at a Railway meeting. The great bulk of the proprietors retired, but a good many remained. Mr. Helps said, if supported by six persons, he would proceed with the election of Directors. This caused much merriment. He subsequently found out and announced that the number must be fifty. To make sure that fifty proprietors were present, Mr. Helps called for another show of hands, when only about fifteen were held up. It was quite manifest that the great majority remained purely "for the fun of the thing." Mr. Hows good-humouredly referred to his own rejection, but ridiculed the idea of being taken for and treated as school-boys, by such a mock-meeting as this. We believe that ultimately it was "carried" that the meeting should stand adjourned for a fortnight, but the confusion was such that nothing could be distinctly made out. Thus terminated one of the most extraordinary meetings of these extraordinary days!

And at another meeting of the same Company, held 2nd July, 1849, the following remarks were made:—

Mr. McPHAIL moved that the meeting stand adjourned for one month. (A voice: "12 months.") He then moved that the meeting do adjourn to this day six months. (Hear, hear, and cheers.)

Mr. PRICE seconded the amendment. He entered his protest against amalgamation. He observed in Mr. Peto's speech of the 24th August, 1848, that he had had an interview with Mr. Hudson. Mr. Peto was rather distressed at the amount of money which the Norfolk Company had spent, when Mr. Hudson told him not to mind two or three hundred thousand pounds, but to lay it on. (Laughter.) Consequently, they had now before them a capital account of £2,300,000 instead of £1,800,000; and how had this additional amount been laid

on? (Laughter.) Why, so far as he could judge, by debentures being made to bear a guaranteed interest of 5 per cent. The accounts presented had, in fact, turned out to be mendacious, false, fraudulent, and cooked. (Cheers.) The Committee said so.

Mr. CHRISTIE.—They don't say so.

Mr. Hows wished to know to what account the expense of proxies was debited?

The CHAIRMAN said he knew nothing about them. (Cries—"Mr. Roney will answer the question.")

A violent noise here ensued, and it was some time before Mr. Roney could obtain a hearing; but silence being at length restored he stated that all he knew about the subject was, that a week ago, when he received his morning's letters, he found a great number of proxies addressed to him in a printed form. He knew nothing about the proxies being issued.

Mr. CASH said, that, as a member of the Committee of Investigation, he might be allowed to assure the meeting that that Committee knew nothing at all about the proxies. He had received one proxy, and had sent it back again to the person from whom it came. (Loud cries of "To whom? to whom?")

Mr. CHRISTIE.—By working harmoniously with the Norfolk line they should be able to earn a fair dividend. (Cries of "Moonshine.") The fact was, they wanted to get rid of the dear London management and the dear Norfolk management too. (Hear, hear.) The public had no right to expect them to carry their goods for nothing. By the carriage of one article alone, viz., malt, they reduced the price from 41s. 4d. to 21s. 8d.

Mr. Hows again rose amid the loudest noise and cries of disapprobation, and by strenuous perseverance succeeded in obtaining a hearing. He begged the kind indulgence of Mr. Nathan personally. (Cries of "What's your name?") His name was Hows. ("Oh, oh," and laughter.) He alluded to Mr. Nathan personally, because a slur was cast upon his name at the last meeting, and when he inquired who was the individual who had so honoured him he was informed it was Mr. Nathan. ("Question, question.") He held in his hand an amendment, which, in his judgment (and he hoped in their judgment also), suggested the only proper way of settling the question. They were at present under the control of a triumvirate and not a Board of Directors. ("Oh, oh," and "question.")

The CHAIRMAN said several amendments had been proposed, and he—

Mr. Box here rose, amid loud cries of "Question," "Sit down," "Let us get to business," &c.

The amendment of Mr. Meek—that the meeting be adjourned until the 2nd of August—was then put, and, after a show of hands, that gentleman announced the decision of the Chairman to be that the amendment was lost. (Cries of "No, no," "Shame, shame," "Hear, hear," &c.)

Mr. MECK demanded a poll.

The original motion was then put, and that also was declared to be lost.

On this announcement great confusion took place, the shareholders rushed from their seats to the platform, crowding round the Chairman, who, after a great effort, announced that the poll would commence at the close of the meeting and continue till 8, and would be resumed at 10 o'clock in the morning and terminate at 4. The noise and clamour became as loud as ever, which lasted for several minutes. At length the Chairman managed to resume his seat, and the business of the day proceeded.

The Editor of "Herapath's Railway Journal" thus remarks on the meeting :—

The scene at the Eastern Counties meeting, on Monday, was not quite so bear-garden as on former occasions. Still there was tumult and ribaldry ; much talking and little business. It is said that a man may be generally of sound intellect but insane on some particular subject. We think this must be true, and of more universal occurrence than is believed ; for the mass of individuals who attend the Eastern Counties meetings appear to us to be like Don Quixote on knight-errantry—mad on Eastern Counties matters, though sane enough in other respects. But whether they are so far gone as to need confinement is a question for the lawyers, not for us. If a man is, as a learned judge has laid it down, liable to the straight-waistcoat when, in the excitement of derangement, he becomes dangerous to himself and to others, we fear that many an Eastern Counties proprietor stands in need of confinement, and has rendered himself subject to the control of the Lord Chancellor. How many were mad on Monday ! how many were not only dangerous to themselves but to others ! To see two or three highly respectable men, upon their legs at the same time, speaking together, and unheard from the din of noises, is enough to give any one the notion that madness was in the atmosphere ; that one and all of the honourable proprietors had lost their senses and were mad enough for an asylum. Even the President of the meeting, the Chairman himself, appeared to be tainted by the spirit of the occasion, now and then gesticulating and articulating in such a manner, that it puzzled us to know what was meant and what would be done.

At a late hour in the day the meeting broke up, happily without loss of life or limb to any one present.

The amalgamation with the Norfolk was the subject principally under discussion—or more properly that which was most handled or hooted.

Also at a meeting of the same Company, held 13th July, 1849, the following remarks were made :—

DR. REILLY (of Ware), said he need not impress upon them the indignation and disgust that he felt at the low figure to which their stock was reduced by the base, foolish, and extravagant conduct of the late Directors. (Cries of "Hear, hear.") Their conduct had ruined thousands of families ; it had made many orphans and widows, and he could say, from his experience as a medical man, had brought many a healthy subject to a premature grave. (Hear.) What could be more baneful or destructive to the constitution, than loss or anxiety ? (Hear.) He would ask any shareholder present if he had not experienced the sad effects of such a state of circumstances ? (Cries of "Yes.") They had been promised six and even ten per cent., and they had unfortunately found the result to be—nothing ! Could anything rouse men's feelings sooner ? (A voice : "We know all about it. Question, question.") He would also, now that he was addressing the meeting, call its attention to the secretary's office. Mr. C. P. Roney must have better employment for the future ; he would be no longer wanted to sign and countersign cheques, and to solicit votes for the Norwich election. (Cries of "Question, question.") He would ask them if they had forgotten the "Feast of Peterborough ?" (A voice : "We have not forgotten the cold collation.") If they would allow him he would state a little respecting it. (Cries of "No, no," and "Go on.")

The CHAIRMAN.—This is out of order.

A PROPRIETOR.—He is not out of order. (Cries of "Hear, hear," "No, no," and great confusion.)

The CHAIRMAN.—We must go on with the proceedings of the day. (Hear.)

Mr. WILCOXON.—Gentlemen, I am here to-day. (Cries of "Let Mr. Helps be heard.")

The CHAIRMAN.—I ask you to support me to-day, gentlemen. (Hear, hear.) I have called upon Mr. Wilcoxon, and he is therefore before you. (Cries of "Hear, hear," and "Go on.")

Mr. Box.—I want to put a question. (Cries of "No, no," and great confusion.)

The CHAIRMAN.—Gentlemen, Mr. Wilcoxon is before you.

Mr. Box.—I won't give way upon this matter. (Cries of "No, no," and "Go on.")

Mr. WILCOXON.—If it be the wish of this meeting that I should give way, I will do so willingly.

Mr. Box.—I shall not waive my right.

The CHAIRMAN.—Mr. Wilcoxon is proceeding, and I must beg you to keep order.

Mr. Box.—I want to know—(Cries of "Down, down," and great confusion.)

Mr. KENNARD.—I beg to move, that all who wish Mr. Box to be heard will hold up their hands. Mr. Box has accused me of arrogance on a former occasion, and I now tell him he is the most arrogant man I ever saw.

Working Expenses of Railways.—No. 281.

In estimating the probable profits on Railways, it is customary to take the working expenses at a certain per centage (generally about 40 per cent.) of the receipts. This mode of estimating is fallacious, as the following statement shews. The lines selected represent different classes of Railways, namely, Railways terminating in London, as the London and South Western and Great Western; Railways in the manufacturing districts, as the Manchester and Leeds and two Scotch Railways :—

Railway.	Length.	Working Expenses per Mile.	Per centage of Working Expenses to Receipts.
London and South Western.....	99	£ 981	26 9
Great Western.....	226	1,481	36·5
Manchester and Leeds	61	1,825	32·0*
Newcastle and Carlisle	65	517	39·3
Glasgow and Ayr.....	51	711	40·0
Arbroath and Forfar	15	234	29·0

* Ten miles on the Midland Railway.

It will be seen, that while the working expenses of the Glasgow and Ayr are only £711 per mile, they amount to 40 per cent. of the receipts; whereas those of the Manchester and Leeds, amounting to £1,825 per mile, are only 32 per cent. of the receipts. An estimate of working expenses on the principle of per centage

of the receipts is therefore unsafe. The amalgamations which have taken place to so great an extent of late years, that there are now only about fifty nominal distinct companies, may be considered to have had some effect on the working expenses; and the first consequence of consolidating two or three companies, each with an independent head office, into one, is undoubtedly to reduce expense. But, as these concerns grow, they become, in the course of time, cumbrous, and a subdivision into departments becomes requisite, each of which must have a staff, so that it may be doubted whether, as a mere matter of economy, centralisation will succeed, when carried to such an extent as to make it impracticable for any one or two chief officers to exercise personal control over the system.—*Harding's Facts and Progress of the Railway System.*

Early Application of Steam.—No. 282.

About 240, B.C., Hero, of Alexandria, contemporary with Ctesibiscus, formed a toy which exhibited some of the powers of steam.

A.D. 549 -Anthemius, a mathematician and architect, employed by Justinian to embellish Constantinople, in a dispute about the walls of a house, was vanquished by the eloquence of Zeno. To avenge the defeat, Anthemius arranged several cauldrons of water, each covered by the wide bottom of a leathern tube, which rose to a narrow top, with pipes extended to the rafters of the adjoining building. A fire was kindled beneath the cauldron; the steam of the boiling water ascended through the tubes, and the house was shaken by the efforts of imprisoned vapour. This is the first notice of the power of steam, as recorded by Gibbon.

Stuart, in his work on the Steam-engine, says, that the royal Spanish archives record that "Blasco de Garay tried a steam-boat of 209 tons, with tolerable success, before Charles V., at Barcelona, June 17th, 1543. Ravigo, the chancellor, opposed it, and it was laid aside. It consisted of a cauldron of boiling water and a moveable wheel on each side of the ship." The expense of the experiment was paid by the government, and a present made to Garay.

The first rail-road was constructed at Newcastle-on-Tyne, A.D. 1650.

The first idea of the steam-engine in England was in the Marquis of Worcester's "History of Inventions," A.D. 1663.

Newcomen made the first steam-engine in England, A.D. 1710.

Steam-engines first applied by Savary for taking ballast or gravel out of rivers, and for raising great quantities of water. Patents granted in London, 1718.

James Watt made the first perfect steam-engine in England, 1764.

First idea of steam navigation in England was set forth in a patent to Jonathan Hulls, for a vessel to go against wind and tide, 1736. Thomas Paine proposed this application in America, 1778. Marquis Jouffroy constructed one on the Saône, 1781. Two Americans published on it, 1785. William Symington made a voyage in one in 1789, on the Forth and Clyde canal; in 1802 the experiment was repeated.

In the meanwhile, John Fitch, of Philadelphia, navigated a boat by a steam-engine of his own contrivance, on the Delaware, 1787.

Ramsey propelled a boat by steam at New York, in October, 1782.

But it was Robert Fulton, a native of Pennsylvania, who first brought steam navigation to such practical perfection, that it became successfully and generally used by all nations. As early as 1793, he began to apply his attention to the subject; soon after, he visited England and France; examined Symington's

vessel, in Scotland; in 1808, in conjunction with Mr. Livingston, the American minister in France, navigated a boat by steam on the Seine—and succeeded in perfecting steam navigation in 1807, when he started the first permanently practical steam-boat, the “Clermont,” on the Hudson river, at New York.

Oliver Evans, a native of Philadelphia, constructed a locomotive steam-engine to travel on a turnpike-road, and invented several improvements in machinery.

America and England have each about 800 commercial steam-vessels; but since the introduction of steam navigation, up to the year 1838, the accidents to English steamers were many, and 80 lives were lost; while, during the same time in America, the accidents were 272, and the loss of lives 1,921. Nearly all the American steamers are river vessels, and nearly all the English sea-going.

The Secretary of the Treasury made a report of great length to Congress on the subject, from which it appears that there were—

Steam-engines of all kinds in the United States.....	3,010
Steam-boats in the 26 States	800
Rail-road locomotives	350
Steam-engines used for manufacturing	1,860
Steam accidents of all kinds since their introduction	260
Steam accidents in rail-road locomotives, (only)	2
Number of persons killed by steam-accidents	3,000
“ “ “ “ (another statement)	9,000
Property lost by such accidents	5,000,000 dollars
Steam-boats built since 1807	1,300
Of these there have been lost	260
“ “ worn out	240
Miles of rail-road travelled by locomotives	1,500
Number of locomotives in Pennsylvania	96
Tonnage of all the steam-boats	155,473
Horse-power in steam-boats	57,017
“ in rail-roads.....	6,980

A Railway Anecdote, but no Joke.—No. 233.

Once upon a time, as some writers say, not far off the celebrated year 1845, a lady of title, so gossips talk, asked a certain nobleman to go to the House and support a certain bill, stating that, if he did, she had the authority of the secretary of a great Company to inform him that fifty shares in a certain Railway, then at a considerable premium, would be at his disposal. This, of course, is not bribery, but we wonder whether it explains the reason of some people having so many friends in Parliament.—*Herapath's Journal*, 19th May, 1849.

Large Wire Rope for the London and North Western Railway Company.—No. 284.

One of Messrs. Kuner's patent wire ropes was delivered, in June, 1849, at the Edge Hill station (Liverpool) of the London and North Western Railway. It has been supplied by Messrs. Francis, and H. J. Morton, of Liverpool, and is, perhaps, the largest wire rope ever manufactured. It is 6,000 yards long, and weighs 18½ tons. It is intended to work the whole of the traffic from the north docks through the new tunnel to Edge Hill. A hempen rope, to have done the same work, must have weighed upwards of 30 tons.

Continental Railways in 1849.—No. 285.

The length of the whole of the continental lines is officially estimated as follows :

1. France, 2,040 kilomètres ; 2. Germany, 5,392 ; 3. Belgium, 795 ; 4. Holland, 260 ; 5. Denmark, 195 ; ditto, comprising the duchies of Schleswig and Holstein, 900 kilomètres, viz., 240 open, 1½ nearly finished, and 734 kilomètres projected ; 6. Switzerland, 125 ; 7. Italy, 269 ; 8. Hungary, 250 ; 9. Russia, 180 ; 10. Poland, 300 kilomètres ; total, 10,552 kilomètres, or 2,110 leagues. From the present unsettled political state of Austria and other parts of the north of Europe and Italy, added to the very great scarcity of money generally in France and other dominions, Railway progress and speculation have, for a time, come to a standstill. For Spain there is only, as yet, the short line of the Barcelona and Mataro.

How to get Free Quarters in London.—No. 286.

Why the deuce don't you make yourself useful to the commonwealth by calculating a gradient, laying down a curve, or preparing a table of traffic, in order to obtain the proper qualifications for a Railway witness ? Nothing in this world is easier. You have only to sit at your window for a given amount of hours once a week, and note down the number of cabs and carts which jingle along the Broomielaw ; and, if you like that better, to ascertain the quality of the soil three feet beneath your own wine cellar, and you are booked for a month's residence in London, free quarters in a first-rate hotel, five guineas a day, and all expenses paid.—*Blackwood's Magazine*, October, 1845.

Cost of Canal Opposing Railways.—No. 287.

At a meeting of the Grand Junction Canal Company, 1st December, 1846, it is stated,—

During the last session, twenty-six bills were introduced for the construction of Railways which would, more or less, have interfered with the works of the Company ; the expense either of resisting these projects, or of getting inserted into their bills clauses necessary for the protection of the property of the Company, has increased the extraordinary expenses of the present account by the sum of £1,138 16s. 1d.

Telegraphic Feat.—No. 288.

President Polk's cumbrous message, containing upwards of 50,000 words (!), was transmitted all the way from Baltimore to St. Louis in 24 hours, and this, too, with the minutest punctuation mark in the document. Copies were also dropped on the way, at York, Harrisburg, Carlisle, Chambersburg, Bedford, and Pittsburg, in Pennsylvania ; Massillon, Cleveland, Zanesville, Columbus, Dayton, and Cincinnati, in Ohio ; Madison and Evansville, in Indiana ; Louisville, in Kentucky ; and Saline, in Illinois. The gentlemen who accomplished this wonderful mental, mechanical, and electrical feat, are Messrs. O'Reilly, of the Atlantic and Lake Telegraph Company, and H. J. Rogers, of the American Telegraph Company, who wished to prove beyond all cavil, that the telegraph can be made available for the transmission of large documents as well as for short messages.—*Herapath's Journal* 6th January, 1849.

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ESSENTIALLY NECESSARY TO PERSONS CONNECTED WITH
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"For this excellent little work the public is indebted to Mr. Samuel Salt, by whom the calculations were made and the work arranged. The author informs us, in his title-page, that the volume contains a variety of information not to be found elsewhere; and we give full credit to the assertion. The book should be in the counting-house or shop of every individual in the kingdom who is in the habit of transmitting or receiving goods. To persons interested in Railways (either those already formed or those projected), it will be of great use; while to carriers, clerks, managers of stations, and others largely connected with goods traffic, it will prove invaluable."—*Liverpool Albion*, 17th November, 1845.

"This volume belongs to a class of works which are in the highest degree useful, when produced with care and judgment. Mr. Salt's work contains a mass of valuable information on a vast number of subjects, evidently collected with great care. Mr. Salt is an industrious collector of facts, and we would urge him to persevere in this particular department of literature. The object of the present volume is explained in the preface:—'In arranging the following tables, &c.' observes Mr. Salt, 'it has been my endeavour to ensure correctness and brevity, and to include much really useful information to those persons practically connected with the merchandise department of Railways or Canals. The carrier, also, will find it a useful compendium, if I may judge from my own practical experience for the last twenty years. The first portion of the work was drawn up for the use of clerks I had to superintend, and saved me much trouble and repeated calculations. The statistical portion has been collected from various sources. I do not lay claim to originality so much as to the peculiar means I have had of obtaining matter hitherto withheld from the public.' The first portion of the work will, we should imagine, be in the highest degree useful to all who are engaged in the carrying trade. It consists of a series of elaborate calculations of toll or freight charged by carriers. These tables are followed by a calculation of tolls from ½d. to 3d. per ton per mile, from 1 to 200 miles; and tables are next given for calculating the weight of Timber, Grain, Flour, Hay, Corn, &c., &c. These tables, which appear to have been very carefully produced, occupy about one-third of the volume, the remainder being filled with miscellaneous statistical tables, and other information of the like character. The statistics of Railways and Canals are given at considerable length. The work of Mr. Salt can hardly fail to be useful to those parties for whom especially it was prepared, and to men of business generally."—*Midland Counties Herald*, 4th December, 1845.

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No. 200.

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FINIS.

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